DOCUMENT RESUME

ED 244 540 HE 017 243

TITLE	Public Hearing on Preparation for the Transition to Higher Education (Chicago, Illinois, October 6, 1982).
INSTITUTION	National Commission on Excellence in Education (ED), Washington, DC.
PUB DATE	6 Oct 82
NOTE	149p.; For related documents, see ED 225 996, ED 227 096, and HE 017 237-244. Document may not reproduce clearly.
PUB TYPE	Legal/Legislative/Regulatory Materials (090) -- Reports - Descriptive (141)
EDRS PRICE	MF01/PC06 Plus Postage.
DESCRIPTORS	*Academic Standards; Access to Education; *Articulation (Education); *College Preparation; College School Cooperation; Educational Opportunities; *Educational Quality; *Equal Education; Hearings; Mathematics; Political Influences; Postsecondary Education; Sciences; *Secondary Education
IDENTIFIERS	EQuality Project; *National Commission on Excellence in Education

ABSTRACT

Perspectives on college preparation and the transition from secondary to postsecondary education are addressed in a 1982 public hearing. Two main goals are articulated: to improve the quality of secondary school curricula, and to ensure access to or equality of educational opportunities for college for minority and majority students. An overview of a strategy employed by the College Board's Equality Project is provided, which includes consensus building regarding the nature of college preparation. Based on this project, statements have been developed concerning the basic academic competencies and subject areas that high school students should know. Additional topics include: the National Science Board Commission's work and the concern over the declining participation and achievement in science and mathematics, the National Science Board's view that such declines are a major societal problem not just a problem with education, the view that governance of public education in the United States is linked heavily to the political arena, and the tension between equality and quality. A view, represented in a book called "The Paideia Proposal," is also discussed, which consists of seven propositions or recommendations for educational quality and equality. (SW)

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HE017 243

U. S. DEPARTMENT OF EDUCATION

In re:

Public Hearing on

Preparation for the Transition To Higher Education.

U.S. DEPARTMENT OF EDUCATION
NATIONAL INSTITUTE OF EDUCATION
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Room 2 EF,
Center for Continuing Education,
University of Chicago,
1307 East Sixtieth Street,
Chicago, Illinois,

Wednesday, October 6, 1982.

The public hearing in the above-entitled matter was convened, pursuant to notice, at 9:00 o'clock a.m.

BEFORE:

CLARK CHIPMAN, U. S. Department of Education.

MARSHALL SMITH, Wisconsin Center for Education Research.

HAROLD C. WRIGHT, Secretary's Regional Representative, U.S. Department of Education.

DONALD GILL, Illinois State Superintendent of Schools Office.

ROBERT WALLHAUS, Illinois State Higher Education Executive Office.

PHILLIP WHITEMAN, Indiana State Superintendent of Schools Office.

JOHN DOBBS, Michigan State Superintendent of Schools Office and State Higher Education Executive Office.

GREGORY WADDICK, Minnesota State Superintendent of Schools Office.

ROBERT RUSTAD, Minnesota State Higher Education Executive Office.

ARNOLD CHANDLER, Wisconsin State Superintendent of Schools Office.

PAUL SPRAGGINS, Wisconsin State Higher Education Executive Office.

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PROCEEDINGS

CHAIRMAN WRIGHT: Good morning.

On behalf of the U. S. Department of Education, I would like to welcome you to this conference.

My name is Harold Wright. I'm the Secretary's Regional Representative, and it is so nice to be in this kind of a group. The last group that I chaired was the three-day public hearing for Proposed Rule Changes in Publice Law 94.142, and that was somewhat different, and I appreciate your being here, and I really am looking forward to a tremendous exchange of ideas on the Transition to Higher Education. So on behalf of the Department of Education, thank you for coming.

MR. HENRY: Good morning again.

Your program says Larry Hawkins with the Office of Special Programs. I have to give you his apologies. There is a faculty advisory meeting that was called this morning, but he hopes to be with us shortly.

On behalf of the Office of Special Programs, I'd like to welcome all of you to the University of Chicago.

We hope that your stay will be a very pleasant one and hope that you will stay with us for a while.

A couple of housekeeping things that I'd like to take care of. There is a cafeteria downstairs which is open as of now. The dining room does not open until 11:30, and it will be open most of the afternoon.

For those of you who will be catching cabs or going to the airport from here, there is a limousire service downstairs. It stops on the hour, but you can check with the receptionist on the first floor, and she'll let you know when it will be here. They generally announce it.

If any of you are expecting messages, they generally will page you downstairs; but if not, the messages will be at the front desk; and any calls that you need to make from that point, they'll be glad to help you.

Again, welcome from the Office of Special Programs, and we're happy that you're here.

MR. CHIPMAN: Thank you very much, Dave, and we are certainly appreciative to the University of Chicago and the Office of Special Programs for providing this space and the facilities and, please, again, convey our thanks to Larry Hawkins.

Prior to introducing the facilitators for today's session, I would like to acknowledge a couple of program changes. In the letter of invitation, it was noted that the Ohio Plan would be presented, budget restrictions; and the Governor of Ohio, in his interest in maintaining the growth and development of the educational system in Ohio, indicated that Dr. Walters, the Chief State School Officer, should be on standby for this entire day. As a result, we will not have a presentation on the Ohio Plan.

Secondly, you also will note in the program in front of you that Emeral Crosby who is a member of the National Commission on Excellence in Education was to be with us. I received a phone call late yesterday indicating that the four-week teachers' strike in Detroit--and he is a principal of Northern High School--

MR. DOBBS (interrupting): Three and one-half.

MR. CHIPMAN: John?

MR. DOBBS: Three and one-half.

MR. CHIPMAN: O.K., correction, only three and one-half weeks according to the representative of Michigan.

(Continuing) The strike ended yesterday; and as you can well suspect, Dr. Crosby felt it was mandatory that for the first full day of school that he remain in Detroit.

Aside from that, the program will continue as indicated in front of you.

In an effort to expedite our session due to the time constraints, I would, as I introduce our two facilitators, I will be extremely brief. Their credentials are massive, as you might suspect. Their experience, individually and in tandem, is monumental. As your program indicates, both of them are from the Wisconsin Center for Education Research, of which Marshall Smith is the director. Fred works at that center, but his primary occupation,

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among his many responsibilities is also as a Professor of Curriculum Instruction at the University of Wisconsin.

So at this time, I yield to the two gentlemen at my left: Marshall Smith and Fred Newmann.

MR. SMITH: As Clark mentioned, Fred and I are here as facilitators. As such, I think we want to move the hearings along as much as possible. We want to keep topics that seem germane and pertinent on the table for a while so that we can have good questions, so that we can try to resolve, work at some set of ideas, solutions, possible ways that federal, state, and local governments can address problems of the transition of students to higher education.

This panel hearing is one of a number that are going on around the country over this month and next month to feed information, as you know, into the National Commission on Excellence, Secretary Bell's Commission, which will come out with a major report on excellence in education sometime late in the spring.

The proceedings of this panel, the ideas of the people involved on the rostrum and in the audience will be delivered to the folks in Washington for their consideration on working on this set of issues.

My own experience with the federal government suggests that people will listen to the hearings of a panel like this, particularly if there are clear-cut ideas that

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address the critical issues that can be addressed in this particular area, and there's no question in my mind but this is the most critical area facing the overall domain of education right now. One only has to look at the 90 bills in Congress dealing with issues having to do with high schools, with science and math, with transition to college, through college financing. There's tremendous interest, tremendous concern.

Congressman Perkins is holding hearings right now on a major bill that he has submitted with the sponsorship of the National School Boards and a variety of other organizations, trying to deal with the issues of improving the quality of high schools, improving the access of students to technology, to science, to mathematics, and to foreign languages; and it all gets wrapped up in the general issue of the productivity of the country, of the employment rate, of competition with other countries, with Japan, with West Germany, so that this issue is set into a context of tremendous, tremendous social importance, and I think we have today two people who are already here and a third who will join us--three people who have worked on projects that have looked closely at these issues over the period of the last couple of years. They are three of the more significant projects out of 25 or 30 projects that have been initiated around the country looking at the state of the Ameri-

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can high school and the relationship between the high school and college-going or high school and not college-going for that matter.

We expect to see issues addressed today of a philosophical nature, issues that have to deal with contribution of education to productivity, issues that have to do with whether or not a democratic society can bring itself to provide equality of opportunity to all people to a higher education.

We also expect to see people address somewhat more nitty-gritty issues, issues having to do with the nature of high school and college requirements for graduation, issues having to do with the relationship between the high school and college requirements, often a concern of many who have looked at the broad span of concerns of the transition to postsecondary education.

Our program this morning will be organized in the following general way. We will have three speakers. Following each speaker, there will be a ten-minute clarification discussion and questions. Each speaker will talk for about 20 minutes. So there will be half-hour blocks of time effectively for each speaker.

At the end of the three speakers, we'll take a five-minute break, and then we'll come back and we will have a more general discussion.

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The discussion this morning will be largely between the panel members here and the speakers. At times Fred and I will--we'll try to facilitate. If there is a pressing issue from the audience, we will call on you, but I think the focus this morning is to try to tap into the expertise on the panel and on their reactions to the three speakers.

The three speakers are, in order--and I'll give a fuller introduction to them when they come up--the first one is Dr. Adrienne Bailey from the College Board and the Project Equality. The second will be Ray Hannapel from the National Science Foundation and the Commission on Pre-College Education in Math, Science and Technology, and the third speaker will be John Van Doren from the Institute for Philosophical Research and The Paideia Proposal--the recent proposal that was published within the last two months or so.

Now, the respondent panel will be responsible for reacting to the speakers directly after their talks.

I'd like the respondent panel to introduce themselves, along with their affiliations, and if they could do so, going down the line.

MR. GILL: I'm Don Gill, State Superintendent for Illinois.

MR. WADDICK: Greg Waddick, Assistant Commissioner,

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State of Minnesota.

MR. WALLHAUS: I'm Bob Wallhaus, Deputy Director for Academic and Health Affairs with the Illinois Board of Higher Education.

MR. RUSTAD: Bob Rustad, and I'm the director of Policy, Planning, and Research for the Minnesota Higher Education Board.

MR. DOBBS: I'm John Dobbs, Assistant Superintendent of the Michigan Department of Education.

MR. CHANDLER: I'm Arnold Chandler, Director of Program Development in the State Department of Education, Wisconsin.

MR. SPRAGGINS: I'm Paul Spraggins, Director of Educational Opportunities, State Department of Public Instruction, representing the Wisconsin Higher Education Board.

MR. WHITEMAN: Phil Whiteman, Associate State Superintendent of Education for Indiana.

CHAIRMAN WRIGHT: We have a nice mix of both precollege and college education.

The first speaker I would like to introduce is Dr. Adrienne Bailey--I think we have our third speaker--yes, Mr. Van Doren.

It's impossible to recite Adrienne Bailey's credentials without taking up all of her time. Let me just touch on two or three. She was a teacher which is one of the more important credentials. She was a senior staff member of Chicago Community Trust for a number of years--coming back to Chicago is like coming home, I guess, and she is now a senior vice president, vice president of academic affairs of the College Boards. Those are her avocations.

Her vocations have been manifest in the field of education. Just a couple--she's been a commissioner of the Education Commission of the States and on the Executive Committee, and sheis a past president of the National Association of State School Boards. There's probably no one more qualified to talk to this issue than Dr. Bailey.

Adrienne.

STATEMENT OF DR. ADRIENNE BAILEY,

THE COLLEGE BOARD AND THE EDUCATIONAL EQUALITY PROJECT

DR. BAILEY: Thank you very much.

It is nice to come home. I must say the speaking invitations I get to come back to Chicago are always ones that I accept without much question because I do consider this home; and even in my work at the College Board, I always have a special place for Chicago in terms of the work we're doing in the Educational Equality Project.

On the plane last evening when I was reviewing Clark's invitation letters, I picked up that he had at least asked us to do three things:

One, to talk about the Preparation for the Transition to Higher Education; to talk about college admissions and the transition; and for me in particular, to talk about the Equality Project, all of which I must say, Clark, are interrelated themes but could be viewed as some separate topics in terms of all the parameters and problems and concerns related to them.

The issues of quality and college preparedness and transition to higher education and articulation between the two levels may appear at first glance to be the educational fads of the '80's, as the last week's "Time" magazine article described them; but actually these issues have been around a very long time, more than any of us here today.

Among the reasons that colleges and universities banded together in the late 1800's were to deal with the issues of demarcation between universities and secondary schools, to provide a more effective means of communication between the colleges and the high schools, and to establish expectations of how students from secondary education should be prepared for college admittance.

The regional accrediting associations which now evaluate and accredit schools were the first formal group to emerge out of occasional meetings that were held by principals and headmasters and college leaders in the early

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1880's to discuss the problems related to confusion in admission practices. To deal with the problem of the variety of admission standards in the different colleges, representatives of the New England, and now the Middle States Accrediting Association, came together in 1900 to develop a standardized approach to admissions. Those were then the first assessment instruments which colleges began using to decide how students would be admitted to college.

The result of the discussions then of the accrediting associations then later resulted in the creation of the College Entrance Examination Board. I just thought you'd be interested in that history, particularly since that's the organization that I represent; and within a ten-year period after 1900, 25 eastern colleges had adopted the new examination as a basis for their admission of students; and now some eighty or more years later, the College Board does exist as a major provider of assessment services which are used by colleges to make choices about students and which aid students in making college decisions and college choices.

You probably best know the College Board by the SAT and the PSAT and the test dates and the AP and the CLEP, and et cetera; but, really, the College Board is more than an admission testing program. A continuing program of research is central to our work and mission;and by our charter, the Board is also committed to the development of representa-

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tive opinion with respect to educational standard.

This is accomplished by providing a medium for the cooperation of secondary schools and colleges and other institutions of higher education to discuss common educational problems, to reach consensus or possible solutions, and to implement programs and services in the solution of those problems or in the enhancement of the attendant opportunities.

So our meeting here today could be described in some sense as revisionist history. It clearly underscores the contention that the more things change, the more they remain the same. In the 1980's, however, the players are different. Back then there were a smaller number of schools and colleges coming together. Now we have a much larger number, clearly a much more diverse group of participants, and clearly the agenda is larger but very much the same. So it is out of this context, the College Board's heritage, and our long-term commitment, coupled with our experience built up over the years and our charter and the deep concern of our membership--schools and colleges--about issues of quality and access to higher education that cause the College Board to say, "The Educational Equality Project Was Needed."

In its simplest terms, The Equality Project--we have a new name--not The Project Equality, because we ran

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into a trademark problems on that--is an effort of the Board to reach out to the two levels: high schools and colleges, and to try to get them to reach some agreement about what it is, this nature of college preparation that high school students who are college bound ought to have if they are to successfully tackle college level work. So, more specifically, those of you who have seen our literature, you know that our symbol is an "E" intertwined with a "Q". For us, that is very important because it symbolizes for us two very important goals for the decade of the '80's, and that is the focus on quality and our continuing interest in the focus on equity, which I'm not very sure that some of the other projects will pay attention to.

The two goals, then, are to improve the quality of the secondary education curriculum, and, secondly, to insure access or equality to educational opportunities for college for majority as well as minority students.

The more direct stimulus that got us at the College Board involved in this whole issue was the 17-year score decline in the SAT's which occurred between 1963 and 1977. SAT scores dropped 54 points in the verbal section during that time and 36 points in the math; and while--I hate sometimes when I speak to overgeneralize, because I'm sure all of us--state superintendents and college representatives--could go to any more than one community and point out

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good examples of where high schools are doing a good job and students are achieving; and I think if you look overwhelmingly at the evidence, it does suggest that the high school is in need of reform.

Just some examples--some of these illustrations come from your state--a study I saw on Ohio Kent State University that reported a 25 per cent attrition rate of freshmen going through the door after two years of below college work; the recent edition or the 1981 edition of the Condition of Education" would show that 61 per cent of those who declared they were going to college, of that group, 35 per cent were enrolled in a college prep program; and as more and more of inadequately prepared high school graduates entered college, what we were seeing then on college campuses is the proliferation of remedial courses, and I know you all know the story about that, and I could go on and on and add more and more complaints.

We, five years ago, asked Willard Worth, the former Secretary of Labor, to head a Blue Ribbon Panel to look into why the SAT scores declined, and this impartial panel said to us that there were a number of reasons but did point very specifically to one reason which had to do with a lowering of standards, a lowering of quality, in the high school; and it really challenged the College Board to say, you know, your business may be largely assessment, but

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also it is concern about the condition of education, and you should try to do something about it.

Now, how we got into this situation of the high schools I don't think would be a good use of our time this morning. Briefly, some people have speculated that the high schools are at fault, that they in responding to the pressures of legislatures and other special interest groups, have had to insert more electives and vocational courses in the curriculum, and that has caused the academic part of the high school program to suffer. People have pointed fingers at teachers saying that they have inflated grades because of having students who possess major academic deficiencies, and there's no way that they could give them all "D's" or failure grades.

Others have been critical of the colleges, saying that colleges have watered down their prerequisite requirements, and that has sent clear messages to the high schools to say kids don't need as much.

I was through Chicago a couple of weeks ago and read the story about the Creighton University basketball player returning to Collins Prep School to learn now at this stage of his life how to read and write because somehow through high school and college he hadn't picked up those skills. Well, those kind of stories don't do much to give the public a sense of confidence in our colleges or

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universities.

There possibly may be truth in these claims and to other explanations as well, and I'm not really here to point the finger or to assign the blame because I think all of us would agree that the problems of our high schools go deep into the roots of our national history and to the character of its institutions and we probably should not dwell too long on those reasons but, more appropriately, try to find remedies, remedies that are not stop-gas measures but can be sustained over time.

We feel some encouragement because, as you know, last week the College Board released the new SAT scores which show a two-year period of stabilization and now a three point upward--I was going to say trend, but that's one of the things we are careful about saying--we don't know if it's a trend or if it's a temporary interruption. We're hopeful that it may be a sign that schools are improving; but, at the same time, you saw the press release yesterday on the College Board's first release of its ethnic racial data which shows there are major gaps between minority groups, as much as a hundred points differential between black scores and white scores on SAT's, which shows us, in spite of this turn upward, that we still have things to do in secondary education.

A number of national studies and projects are currently under way that address high school reform, and we're cooperating with most of them. You're having a chance this morning to hear from several. I always like to say that I like to think of our effort as somewhat different, somewhat unique, in that, first of all, we have a ten-year agenda--we're not doing a short and dirty study and disappearing and laying it on the hands of the practitioners and those of you in the field--we like to think that our approach is one of action in its orientation. It involves the two levels, and it is focused on quality as well as equality.

In terms of our cooperation with the Commission, this represents my own third appearance and participation in Commission panels and hearings; and, additionally, we are cooperating with Kettering and the Johnson people in Racine and the Commission on Excellence to bring 28 of the high school projects together November 3 and 4 to talk about what is this message we're sending to those of you who are in the field and on the firing line.

I describe the Equality Project strategy as one of leadership, one of further consensus building, bringing people together to reach agreement on this nature of college preparation, serving as a catalyst that is the third party neutral force, sometimes bringing levels together, which seems easy just to have a meeting to get people to talk, but I found that in many situations, at state levels

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or local levels, there is political turf and people don't do this very easily.

We're going to try to influence our members, colleges and schools, to pay attention to what we are going to be producing. We hope to use the statements on the nature of college preparation as leverage to cause change in the secondary schools. We will be involved in disseminating information, sharing of promising practices, linkage as well as demonstration.

In our first two years, the Equality Project has largely been devoted to consensus building. The Board has served as a catalyst in bringing together more than a thousand school and college educators representing large and small school districts, public and private, in urban and rural communities. We brought them together to discuss the college preparatory curriculum; and out of those discussions have resulted two basic sets of statements on what it is that students should know if they're to go to college.

A set of basic academic competencies that this group agreed on is that all students, regardless of what kind of institution of higher education--community college to Harvard, should have reading and writing, speaking and listening, doing mathematics, reasoning and studying; and I do have some materials, so that you don't have to write all this down, that I'll leave with you.

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You may say, "Well, why are these so important?" One, because they're stated in abilities, expressive competencies; that is, what it is a student should know and be able to do if they are to go to college, so that if the student goes through three years of math, and the parents and the student and the school say that they've done the three years of math that the University of Wisconsin wants, unless they've gotten out of the three years of math the basic learning skills and abilities. I don't care if they had six years of math, they don't have the skills to make the transition.

The second set of statements focuses on the subject areas that students should know in high school. They are English, foreign or second language, history, social studies, math and science, and visual and performing arts. We have not completed the work on these statements, but we hope to produce by the early part of 1983 a similar statement listed in outcome of what should result in terms of whata student should be able to do and exhibit as achievement ability if they have studied these areas.

After achieving that consensus within the education community about this nature of academic preparation, we plan to use that agreement as leverage to cause people to begin to talk about it and see it get translated into action.

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I can impress upon you one point that I think sometimes gets misunderstood in our effort, and that is the Educational Equality Project is not an intention to impose standards or specific curriculum on any subject, grade, school or institutional educational unit. Arbitrariness is not a factor in any aspect of the project; and in its formulation, as we have seen there is consensus, we are trying to encourage local schools and school districts and educational organizations and state agencies to adapt the project's principles and guidelines to their individual requirements. So, as I said, we see our role primarily as one of being catalytic, serving as a conduit and a catalyst.

Well, it's evident that there is national concern about the quality of secondary education, about maintaining standards in general; and I would just cite for the panel and the audience a few of the things that we see occurring.

For example, colleges and universities we are seeing begin to use the statement of basic academic competencies to define their expectations of entering students. This is occurring in California where almost everybody knows about the new statement for freshman admittance that that system has put out. They, in fact, have taken verbatim much of Equality's statements on competencies and included them in that document.

The Executive Council of the American Federation

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of Teachers has endorsed the Project's competencies and, similarly, the State Higher Education Executive Officer, SHEEO at their annual meeting in Seattle this summer endorsed the College Board's Equality Project and encouraged its member states and representatives to consider the applicability of its product and processes; and we're going to be working in the months ahead more with Wayne Brown and with the SHEEO committee on educational standards.

Governors and legislators are appointing commissions or task forces on educational standards. Clark mentioned the Ohio experience, but it's hardly a day that goes by that I don't see a new announcement of a task force on pre-college prep or articulation.

Similarly, states are looking at educational standards in Illinois and Florida, in New York and South Carolina. We are also pursuing discussions about the competencies with business and industry leaders. You may say isn't this far afoot for the College Board. No, because what we hear the business community saying is give us a good prepared student of basic learning skills, and we'll worry about the technical training; but if a student can read and write and know how to use information, you could do us all the good in the world just sending us that kind of student.

So as we sense the need for change to occur to

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meet a broad base of community support, the business community support, of what the schools ought to be teaching, I think is critical.

We'll be carrying out a number of functions in the months ahead. Attention will continue to focus on both issues of quality and equality. We're going to be encouraging our members to adopt the competencies in the statement, try to get schools to begin to incorporate them in their curriculum, try to get institutions of higher education to consider language similar in their messages to young people who are coming to their respective institution.

Now, all of this sounds good, and I know that there are problems. We've identified a number of issues that represent challenges if we are to make the Equality Project effective, even though we have eight more years to do it. One is going to be money--adequacy of it, and where we're going to get the science teachers to provide the kind of high quality science instruction that these young people need to achieve effectively in these two areas.

We need money for more courses, for better salaries, for smaller classes for remedial help, et cetera. Teacher training is an issue that has really come to the fore--questions both on the part of higher education and state agencies--can the high school teachers teach the competencies, and are we modeling organizationally high school

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curriculum so that every teacher is a teacher of competency. The history teacher, therefore, takes responsibility for writing across the curriculum, for correct grammar, for spelling, speaking and listening. My sense is that is not being done to a large extent in high school classrooms today.

We're going to run into problems of academic freedom. People are going to say, "Oh, wait a minute. America is built on diversity in education. We don't want this coming from on high and imposing things on us." So I think there's going to be resistance for trying to push harder for some better measures of educational standard.

We know there are questions that say to the competencies, "Well, they're so simple that anybody could, you know, could agree that that's what is important," and the question of level, to what level do the colleges want the high school to prepare students. We're not about to get into that debate about levels except to say that that needs to be something that occurs between the respective institutions--and it could be different, the level for Harvard or for the city colleges of Chicago or for another institution. Some students may need more.

We know that there are going to be political and economic barriers, and those of you at the state level know about those very well. We've come to a period where on

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higher education campuses there's been a lot of building. We know there are a lot of empty seats, and we know the demographics suggest that the future population is going to decline significantly in terms of high school students. So instead of some institutions trying to push hard for standards, many are going to be opening their doors wider to fill up the seats and to save jobs.

We know that there is going to be this continuing issue of equity which is not going to go away, because if you do look at the population trends, you're going to see a decline in high school age population but increasing numbers of minorities. So if you look at the statistics comparatively as what's happening to those who are getting access and what's happening to those who are dropping out of college, we're going to be in big trouble in the 1990's if we don't seriously get busy about addressing the issues of clarity.

So at the College Board, I would just close by saying, the Equality Project is trying to get a message across to education policy makers, to administrators in high schools and colleges, to students and to parents; and these are the messages:

That there needs to be a clearer statement of academic performance expectations expressed in terms of learning outcome so that students, kids, parents, and we

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all know what we're asking kids to do.

Secondly, that we got to get a message to kids that says, "You've got to be concerned for not just getting into college, because in the '80's you can get in almost anywhere--somebody will take you--it's getting in and getting out which is the point, I mean getting in the door and not having to spend either ten years there because you are being remediated, but so that you can metriculate through, that student counselors need to be giving students stronger messages that say you should take a strong academic program in the high school; and while the state may allow you to take four years of choices from 999 in English options, unless you're taking four years of something that is providing with basic skills, then you may be satisfying high school graduation standards, but you are not preparing yourself for college.

Another message that we're strongly suggesting is that teachers and college faculty should communicate far more than they have in the past about these expectations. It's not fair to the high school faculty for the college people to sit and point blame and say that if you would just do this without telling very specifically what this is--we're suggesting that as another message, that schools need to be measured more strictly on the quality of their academic programs.

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Finally, that the movement to raise standards must include provisions not only for quality but for equal access, and so we're suggesting strongly that this new trend in college admission standards, which is promoted in the name of "Educational Quality", first of all says to us an institution cannot be necessarily measured on its own quality by who it lets in, but more importantly by its ability to let in a group of people and have them leave with the same kind of exit criteria.

We're trying to get this message across through our leadership role in speaking about the quality of the academic program, as I said, through our catalytic role, our influence, our leverage, where it can be productive. We're hoping for some fairly clear results, and I know this sounds so inspirational, and again I can't help but underscore this--we know that it's going to take a major effort to try to pull off, but we want to see more students that are prepared for college. We want to see more minority students in college and more financial support for schools and better and more highly valued teaching and a restored public confidence in education, and I think that those issues, our goals, are closely tied to what I think represent the panel's, as well as the audience's, desire for schools and colleges; and we're anxious to work with all of you to cause that to happen in the eight years that lie ahead in

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our project.

Thank you.

MR. SMITH: Adrienne, thanks very much, and it's a good start for the morning.

I'd like to turn to the panel for three or four questions, points of clarification or points of particular interest that the panel has for this project, remembering that you will have a chance to come back to it towards the end of the morning.

Mr. Spraggins.

MR. SPRAGGINS: Yes, I have a question.

I think the Project Equality has some issues in terms of what it's trying to do. I have a particular interest in how it purports to work. I'm interested in intercity schools where the curriculum is not always as good as we'd like for it to be, and as we talk about increasing standards for access into higher education, what are we really going to do about this real bad problem that we have in intercities, particularly having read the report where more than a hundred points separates black students from all other students, not just majority students, but it appeared from the report, even of the minority students who have SAT's that are so and so, there's such a wide gap. I would just like to get a look at some more information at some of the specific plans other than just to encourage

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the school districts to do something about it.

DR. BAILEY: First of all, I would just like to commend the recently released ethnic data to all of you for really serious analysis, because there's some interesting variables in there. One of them that I picked up that I just think is fascinating is black students are not in the college prep courses, and they're not in the vocational ed courses, according to the data. So the question becomes where are they, where are they in the schools. Now, you know, all I can go is somewhat about what I know in Chicago, and I do know that the voc-ed schools where the highest technical training is occurring has admission standards which excludes, misses some. So my sense is that those vocational schools are training the best, and the rest are floating around somewhere that nobody doesn't even know where they are, so that's one point.

Secondly, in terms of focus on the intercities, I think that what we recognize is that we need to do quality and equality in terms of strategy; but by picking Central City in our attempt to focus on quality, in fact, can accomplish equality, so that our respective regional offices have targeted cities like Atlanta, Charlotte, Chicago, San Antonio, Texas, as major centers to consider becoming part of what we hope to get under way, a model kind of consortium of people who want to work together to revise

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curriculum and to upgrade standars. So that's one thing.

Secondly, we are exploring with superintendents from 14 or so of the major school urban centers a project on reasoning, how do you teach reasoning; and we're hopeful to get that under way with some demonstration sites by December of next year, and so that's the second thing.

In San Antonio, Texas, we have a project funded by the Minnie Stevens Piper Foundation, a three-year, million-dollar project, which is offering a PSAT free to minority youngsters. The results of the sophomores who took that last year--or it may have been juniors--showed 100 per cent increase in the young people because of a mass community campaign that said take the test, 107 per cent increase of those Hispanic kids who took the test. Similarly, the other part of that program is to institute advance placement in more high schools serving minority students, and I learned yesterday that just between last year and this year, there now are 20 more high schools that are offering advance placement. Well, you may say, "What does that do?"

What it does is it offers the widest continuum of quality to minorities which heretofore they didn't have an option to in terms of, you know, high school education. So those are just some of the things. We hope to look at some remedial programs. We'd also like to look at some

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college articulation efforts which particularly are focused on disadvantaged minority students as opposed to just general articulation activity.

MR. SMITH: Dr. Gill.

DR. GILL: Adrienne, as you know, I'm very much interested in the concept of what students ought to know and be able to do as they make the transition from secondary school to college and also after that, and as you address this question of standards and improving standards in terms of what students ought to know and be able to do, as in one instance, the basis for admission to college, even though you indicated that the levels of thos accomplishments should be left to the mutual judgments of secondary schools and colleges, is there not a real potential for building a kind of exclusionary process into this where we may find ourselves determining by setting those standards just what percentage of students we're going to allow to go to college, and does that not, despite the problems that we've had with so much open enrollment, does that not work more against minority students than it does against majority students?

DR. BAILEY: I guess that question has several points to it that I also am concerned about. One is that I mentioned in my remarks about our support for institutions to maintain standards for college and universities; that is, they have a right to decide on what basis they want to admit students. I guess my particular pointon that is to do that arbitrarily without some concern for equal access or to do it without any other messages to students about what does this mean, I think is unfair, so that in one sense I would hope that a further definition of expectations could reach minority students so they become more understanding of what they should bring, so that's one point.

Secondly, I am concerned about us moving to what may be perceived as too narrow a definition of quality, and that's one of the things I think we have to protect in these conversations, and that quality of higher education can achieved if a student goes to a community college, goes to a state university, or goes to MIT or Harvard, and that what I think I have as the greatest fears, that the standards are going to come out at some uniform level that says below this, you know, what Malcolm X may do is not any good; and I think we have to work on maintaining that diversified point of view with respect to the college admissions process and also in terms of translation of this interpretation of quality.

The other thing is I guess I have to say that I personally do support a movement for quality and an expectation that minority as well as majority students have some basic learning abilities because I think, if anything, that part of the problem with the equal access movement is that we've been saying to students, "Well, you made it," and we have been producing college graduates--I had a secretary in my office that has college degree, and she can't even spell or punctuate. So I wonder, you know, what fairness is in that, at the same time knowing that overall we've got to push for both issues; and that's what I say will be the College Board's commitment.

I think we want to then get involved in such other issues which have to do with assessment, not necessarily for decision-making in terms of who gets in and who gets out, but how can we diagnose and assess students early in their path upward, so we can say to teachers and to them and to parents, "These are academic deficiencies. Now let's talk about how we can remediate them." What do we know about remedial developmental efforts that the colleges are doing this great job with, that high school could, you know, take into consideration?

DR. GILL: I'd like one more brief comment on quality. As you look at some of the recommendations that are coming foward as far as the number of courses that are to be taken and the emphasis in English, math, science, and foreign language, you immediately begin to conclude that the schoolday is used up, and that seems to narrow the definition of quality in preparation for college to those areas when, in fact, I think all of us agree, particularly as we look at concept of quality as we apply to life generally, that there's much more to life and to learning than those essential, basic areas. What do we do, do we extend the day, do we add another year, do we give some options for those kids in college prep that will allow them to have some fairly normal, natural, quality experiences?

DR. BAILEY: Don, now, you know if I was on the Illinois State Board, we would fight over that for the next year in committee. As people express their own judgments, expression of value, I mean people have said what about the values part of high school. Well, I recognize all of that, and I think that those clearly do have to be policy decisions that are made, and I guess, you know, the greatest remembrance that I have from my State Board of Education days here in Illinois, when you get behind that door, you have all of these options in front of you in terms of what are you going to do, all that other theoretical stuff that you learn in school or as part of your doctoral study, you know, goes out the window because the bottom line is how are you going to vote and where are the rest of your colleagues who are making policy decisions. So those are going to be the issues, I think, for state boards and local school boards, is what is this nature of high school education, how much of it is academic. I mean if we went through an exercise of asking everybody, "These are all the things the high school now is doing, what do you think, I mean what are the priorities and how much time," and you know that everybody here has a different perspective on that.

I think what we're saying is, I feel, unfortunately, that the academic side has kind of been overlooked. The reading and writing part has been sort of understood, and we've got the pressures, I know, in Illinois from the legislators who say do consumer ed, do driver's ed, do phy. ed, all this time, and then make sure that the kids will graduate and that they can read and write. Well, how are they supposed to do it? Where?

MR. SMITH: This is going to be a recurring theme, I'm sure, the whole tension between equality and quality and how a free society can try to manage both; but one quick--just a prerogative of the Chair for the moment--but you know the Japanese, or at least the story is the Japanese have a 240-day school year and six days a week, and I mentioned this to my kids who range between the ages 8 and 14, and they said they'd go on strike. So lengthening the school year may not work.

Let's have one more question for this, and I think Mr. Dobbs was next, and then there will be other questions that can be picked up later on.

MR. DOBBS: Both questions that have been asked so far by both Paul and Don I think go to the heart of coalition. We could take three- or four-day conferences on each and still there wouldn't be enough time.

The question I have--if this is the last one, I'd better make it good, but it's just almost a mundane question--Adrienne, you stated that what's needed is a reform of the secondary schools, of the high schools. What about the reform of colleges, maybe not so much in terms of their expectations, but in terms of their thinking, of college admissions and conditions? That's something I rarely hear. Should there, can there be a reform of that so that the two can have a better mesh?

DR. BAILEY: I think you're right. I'ts just basically as we defined the parameters of equality, that we are trying to take some kind of piece, which is getting kids into the pipeline and connected. That isn't to suggest there aren't a lot of other things because people similarly raise the issue of can you deal with high school without dealing with the elementary school and vice versa on the college level, and some of the messages that are coming to us in terms of need for measures of competency are suggesting things like, you know, colleges want to know what are the two-year transfer institutions sending them in college competency tests, I mean, you know, exit standards kind of criteria. So I think there's some beginning stirrings going around, but, as you know, that's not my area specifically; but I think what you are saying is the colleges could be well served by having some discussion about what is the nature of what they're doing which I think, you know, is an appropriate matter.

MR. SMITH: Our next speaker is Dr. Raymond Hannapel from the National Science Foundation.

Dr. Hannapel has a Ph.D in plant physiology and biochemistry. He has been a teacher at the elementary and the college levels. He has developed curriculum with the American Association for the Advancement of Science; and for the last number of years, he has been with the National Science Foundation as the program manager. Right now he is the staff director for the NSF Commission which works with the Science Board on issues of Pre-College Math and Science, and his presentation today will deal with the work of the Commission.

Dr. Hannapel.

STATEMENT OF DR. RAYMOND JOSEPH HANNAPEL, NATIONAL SCIENCE FOUNDATION COMMISSION ON PRE-COLLEGE EDUCATION IN MATHEMATICS, SCIENCE AND TECHNOLOGY

DR. HANNAPEL: Thank you. Marshall.

I was going to talk off some overheads, but I've decided not to do that since the geometry isn't really conducive for that right here.

I've been asked to tell you a little bit about what the National Science Board Commission is, is about, how it came about, what processes and procedures it's into, and what some of the expectations are for its accomplishments.

I was very interested over the last couple of weeks to have a bad case of telephone ear, and it turns out that on Monday we had an interesting anniversary that may have gotten in the papers and television here: the twenty-fifth anniversay of the launching of Sputnik on October 4. Yesterday in the "New York Times", there was an interesting article lamenting our problems and our slippage, really, declines in science and technology in this country; and Ernie Boyer who is now director of the Carnegie Commission on Teaching, former U. S. Commissioner of Education, also New York State Commissioner of Education, made the interesting comment that we were shocked when we saw Sputnik go up, maybe we could get the Japanese to orbit a Toyota for us, and we'd be shocked into action in galvanizing the national will.

That's kind of an interesting point that he would even put it that way. It shows you how inured we've become with Hitachi, Sony, Toyota, Honda. It is pervasive and ubiquitous. We use Japanese cameras. We have Japanese video recorders and Japanese cars, and they've just taken over being the leading seller in the American market last year. The problem really is not one of a military crisis likely to develop, but we are in the midst of an economic crisis, and really that is one of the reasons--the way this society goes about preparing people to engage in the society, the world of work, and the work of living, that this Commission really came into being.

The year ago the National Science Board, led by Lewis Branscomb who is vice president of IBM, and John Slaughter who is the director of the National Science Foundation, himself an engineer, found themselves asking the question, "What has happened to the consensus that we had that we really needed to go about educating a society that would be comfortable with science and technology that came along after Sputnik," and they were noting that that consensus over the last 12 or 15 years has essentially eroded and dissipated, and they decided to establish a Commission, mainly because there was a consensus that we're facing problems, but no consensus on what to do, what society wanted to do, and who should do it.

That is interesting because everything has a history. This all began well over a year ago, and then in February of this year, the confirmation of the lack of consensus came along when the Office of Management and Budget told the National Science Foundation to abolish its Science and Engineering Education Directorate. So that effort has stopped at the federal level.

Let me tell you a little bit about the Commission, and I might say that I have brought copies of more detailed material, but I just want to point them out to you. There is a little booklet that indicates who the Commissioners are and a little bit about their background and what they are being charged with. There's also a press release with some background information, more extensive data on it; and then specifically this last August, there was a data compilation, and I would like to call it to all your attention because it is probably the most comprehensive source of data on science and engineering education from the elementary school through the graduate, through employment, through careers, and also for both formal and informal systems. For example, you would find information in here on the degree of interest of the U. S. public in science museums, the attendance, et cetera.

This group of 20 people, when you look at them, you'll find a very diverse group of people. You'll find names that you will, I think, recognize--Ruth Love who is the superintendent of the Chicago Schools, Patricia Graham who is the Dean of Graduate School at Harvard, someone you may not be familiar with but also from the educational system, Katherine Layton who is a mathematics teacher in Beverly Hills High School, Victoria Bergin who is with the Texas Education Agency; but this is not construed really as being the consensus developing process as merely to go along in the education community itself. You'll find Gen. Lew Allen who is Chief of Staff of the U. S. Air Force, recently retired, now the Director of Jet Propulsion Laboratories and a vice president of Cal Tech; George Burnett who is an engineer at Iowa State University; Daniel Evans who is the president of Evergreen State College and who is a former Republican governor, a three-term governor; and William Coleman is the co-chair. He's an attorney in Washington, D.C., and the other co-chair is Cecily Cannon-Selby who is responsible for the initial staffing and first dean, academic dean, and now chairman of the board of Advisors for the North Carolina School, the Residential School in Science and Mathematics. You'll find academics--Fred Mosteller, Harvard University. You'll find Joan Parent who is the director of the National School Boards or the president-elect of the National School Boards. You find corporate industry there--Gerald Laubach, president of Pfizer.

The Commission has been charged really to reach out and to look for the perceptions of needed change, some examples of effective remedies that are currently under way, and then ultimately to provide a plan of action, an agenda for action, and a definition of the role of actors.

The time line goes something like this. They were established in June, had their first meeting of the full Commission in the middle of July which took care of the very first phase and the charge to them of finding the nature of the problem. They are currently into a second phase of reaching out to a wide variety of constituencies, looking for perceptions on what changes are needed and what kinds of examples of those changes can we point to that seem to be working.

Finally, during its last year, from January through December of '83, it will be developing again, in communication with these constituencies, recommendations for action, concerted action, sustained action, and, also, a definition and suggestion of roles of various actors: government--federal, state and local, school systems themselves, various supporting organizations, scientific and engineering community, the media, private foundations, and then also to the private sector, to business, employers, the military as an employer, and also colleges and universities who are receptors of the precollege school system in this country.

At their very first meeting, the Commission decided on a, and worked over a staff prepared paper on the nature of the problem; and this paper, this document, addresses one of the charges to the Commission and will be issued within the next month actually. There are a number of statistics--I won't begin quoting them for you--but they decided that the principal concern--and will say this quite clearly--the principal concern has been the declining participation and achievement in science and mathematics at a time when we have increasing national needs.

They look at the components of that problem, and they really start with public attitudes and note that the schools are really a reflection of the larger society and that, indeed, if we are to begin addressing the problem of quality in science, mathematics, and engineering in this country, that we have to look at public attitudes.

A data point you may not be familiar with that recently was published--85 per cent of the U. S. public feel that they are uninformed on matters of science and technology, so much so that they couldn't participate in any kinds of decisions. Think of the referenda that come up and consider that piece of data.

Also, there's a pervasive attitude that, yes, we do need good science and engineering, but the courses that we offer--and this is in schools--are appropriate for those people but not for the general student, that they're too hard and difficult and they're really part of pre-professional training.

Some other statistics like that are that that's an attitude that is shared by students. So th on data such as comes out of the national assessment for educational progress, that over the past 12 years, 15 years now, three national assessments of science achievement, there's been a steady decline, mostly in those areas that require a high order of skills and interpretation and synthesis, data interpretation. The same is true in mathematics, in the areas mostly of problem-solving and applied mathematics.

I might say that the same is also true out of the national assessment on writing and reading. When you look at data on high order skills, skills of analysis, interpretation, inferring meaning, being able to write a compelling and cohesive paragraph--it's these high order skills across the board where the declines has been; and I think I'd like to point out that's really in some ways a very significant data point because it reflects the nation at large. It's a national probability sample.

I realize we are interested in the articulation area here, but I think it gets to some of the kinds of problems that Adrienne was thinking of and talking about earlier.

When we look at articulation, we see some very interesting data coming out of the national or the Conference Board on Mathematical Sciences who have been doing surveys at five-year intervals. From 1975 to 1980, there was a 72 per cent increase in the enrollment in remedial mathematics in colleges and universities across the country. Indeed, if you look at community colleges, fully one half of the mathematics courses are remedial courses. At the college level in science, there has been a decrease in the requirements for science in the curriculum to the point where only about 7 per cent of average time is, baccalaureate, average baccalaureate, is spent in any course of science. These are for nonspecialists now. I'm not talking about science and science-related areas.

That's a finding of the National Academy of Science that was just published in 1980.

So we have the public attitudes that are addressed in this first document, along with some of these indices of declining achievement and declining participation. There is also a section which deals with teachers and the severe and growing shortages of teachers in mathematics and science. The National Science Teachers Association, in a survey done last year, found that 50 per cent of the new hires in secondary school science and mathematics were unqualified and had to be hired on emergency certificates.

Also, the picture has not been very good in terms of the production of baccalaureates in science and math teaching. Over a ten-year period, there has been--that is, from 1970 to 1981, there has been a threefold drop in the science baccalaureates, prospective science teachers. There has been a fourfold drop in the prospective mathematics teachers; and coupled with the fact that only half of those people who actually receive baccalaureates go into teaching in the schools, we have a serious problem there. There's no question about it. In fact, the Commission has avoid crisis rhetoric but refers to this as a crisis.

In fact, this paper when it comes out--and I will through Mr. Chipman make sure that everyone who is registered here receives a copy--that paper will lay all of that out.

I'd like to recommend another piece of information to you which is not yet published because I think it very nicely puts in perspective the relationship--well, first of all, the relationship between the labor force projections and the educational commissions. This is done by the Education Commission of the States by a fellow by the name of Ray Forbes. It was put together for the National Governors Association, and it provides, I think, very discerning data on the educational output when we look at high school graduates. The title of the publication will be "The Information Society--Are Our High School Graduates Ready?" and refers to the statistics of Eli Ginsberg that the labor force, the U. S. labor force, has changed drastically over the last 20-year period, actually 30-year period, since the second World War, with a 10 per cent decrease in the percentage of the labor force working in jobs associated with production of goods and a 12 per cent increase in the percentage of the labor force involved with jobs and professions dealing with services, and that's essentially what this paper gets at, that we are increasingly going to need, if the job market and the projections are correct, thinking, intelligent citizens who can analyze and interpret in their reading and their writing, who can be good problem-solvers in analysis in science and mathematics.

I think I'll end at that and invite you as the Commission goes on to make yourselves a part of that process of consensus that the Commission is trying to develop, and I think it's a very ambitious undertaking. I hope it's successful--one looks at federal commissions and realistically notes their failure rate, and, nonetheless, I think what the National Science Board is trying to do here is worth an effort by everyone; and if it succeeds, it will, I think, accomplish for the society what we haven't had for the past 25 years.

MR. SMITH: Thank you, Dr. Hannapel. Why don't you stay there for a minute?

Questions from the panel?

Mr. Chandler.

MR. CHANDLER: Early on in your comments, you made a statement that really what it's all about, in a sentence, is that we're facing a serious economic problems in the United States of America; and let's assume, you know, that I buy that, think that's what it is. This morning on CBS Commissioner or Secretary Bell was on there, along with the president of the National Science Teachers Association, Bill Aldridge, and since this is a hearing or forum relative to Excellence in Education being sponsored by Secretary Bell, the question I have of you is if this is an economic problem, does that suggest, then, it's nationwide in scope, or that, indeed, as Secretary Bell said this morning in terms of education, that this is not something that should be addressed by the nation but it should be addressed state by state? What's your reaction to that?

DR. HANNAPEL: I don't think there's any question that it's a national problem, and, indeed, if you look at the charges to this Commission, they are really charged to attempt to develop a national agenda, a common agenda for what they consider a national problem. Now, I consider a difference between a federal problem and a national problem--there is no question in my mind, and I didn't hear this interview to really pick up what Secretary Bell said, I don't think there's any question that this administration feels that these answers have to come from the local area, and I'm talking about education.

I think what the National Science Board is saying that this is not just a problem with education. This is a major societal problem, and we've got to solve this together; and that means that there may be a part of the responsibility and the authority and, indeed, the obligation for providing resources, be they intellectual resources, leadership resources, financial resources that reside at the federal level, they are not co-opted out of coming up with that recommendation.

MR. SMITH: Mr. Spraggins.

MR. SPRAGGINS: You've painted a rather bleak and woeful assessment of the problem, and it appears to have been a problem for quite some time--this isn't anything that we just learned, but I didn't hear you comment very much about what the National Science Foundation Board or the Commission is planning to do. What is it that, say, those of us who are involved in secondary education, what is the agenda for those of us in secondary education, to begin to try and turn this around, could you elaborate on that?

MR. HANNAPEL: Surely. First of all, the data shows there has been a decline in participation. From

1969 through 1980, the participation and enrollments in science courses at pre-college level went from about 60 per cent to 48 per cent. Now, one answer to that, and a flip answer, would be what we need to do is reverse that trend. We need more students taking more of the science that is there now--the same with mathematics.

I think what the Board has charged the Commission to do and the Commission is attempting to do--by the way, I should say it is organized into four task groups at the present time: one dealing with governments, those agencies that develop policy, allocate resources, schools or educators, facilitating organizations and then employers or receivers like colleges or like business and private industry.

For example, in mathematics, an offshoot of the first meeting of the Commission was a meeting of the Conference Board of Mathematical Sciences to begin to ask the question, if we considered the pre-college experience for all our students, those going on to college and those going into the work force, what mathematics is now fundamental for all our citizens to have.

It turns out, if you look at the analysis track that rushes headlong into calculus, that's important certainly in the sciences, but it is not the way a lot of mathematics is done in the society, in banks, in insurance companies, and other places. So the Conference Board has begun the process--that includes math teachers, business and industrial mathematics, users, statistical actuarial firms, research, a society like American Mathematical Society--to begin attempting to say what is really fundamental in 1982 and projected into the '90's in mathematics. So I think the educators task group that is chaired by Katherine Layton and includes Ruth Love, includes Fred Mosteller, also includes Herbert Simon, professor of computer science--and, by the way, enlarged with certain other people that have been brought in--elementary school principals and some other people--I won't get into that--are really attempting to say what should be the agenda for the schools, and they're really trying to look at what some of the productive solutions that are already in place are and to be able to focus attention on what they see as some productive steps that are being taken in different places.

MR. SMITH: We have time for one more question. Mr. Waddick, I believe, was next.

MR. WADDICK: If you can identify the fundamentals, as you indicated in your last comment, or attempted, how much science and how much math would you aspire or desire that secondary students take who are headed for college preparation and metriculation, how much science and perhaps math for those youngsters who are not headed in that direction, and my question essentially represents a concern for a degree of balance which would be addressed not only to your remarks but to those of Adrienne who preceded you? I'm from Minnesota, and we do not have a state board requirement that youngsters take any mathematics or any science in Grades 10 through 12. Our experience, however, as we will be reporting out of the State Board this coming Monday, is that 85 per cent of our kids take at least one year of science in senior high school and at least 50 per cent take at least one year in what could be regarded as precollege mathematic preparation. My question is how much do you want.

DR. HANNAPEL: I can give you my personal reaction on that. I can't speak for the Commission on that because that really is what they are putting together, and they are looking at the kinds of examples you are talking about, for example, what are the state requirements, what have been the trends in the state requirements, because there are mismatches when you look, and people say we need more stringent state requirements in science and mathematics. Look at California and Florida, they did away with them, and it's a disaster. Well, there are other states that have never had requirements, and it's where it's a total local option, Minnesota being one, certainly most of the New England states, Massachusetts, et cetera, Connecticut; and there is not a relationship if you look at the science achievement, the levels of science achievement and mathematics achievement that come out of the national assessment with those kinds of state requirements. So it's not a simple matter of saying every state has got to require three years of mathematics, three years of science in high school.

However, I might say that only a sixth, if you look at it nationally, only a sixth of our high school students are taking science or mathematics in the eleventh and twelfth grades. That's the national figure. If you look at the situation in Japan where they have universal education, in fact, they have a higher percentage of their population graduating from high school--it's up around 92 per cent compared to the United States--students are being continually exposed to science and mathematics in the curriculums. So maybe what we need to do is to rethink the exposure and timing of exposure, so that we do more science and mathematics at a time when students are more mature and perhaps more able to deal with the kind of abstract and conceptual matters that come up in these subjects. That's my personal opinion, I might say.

MR. SMITH: Thank you, Dr. Hannapel. We'll get back to you before the end of the morning.

The third and last speaker is Dr. John Van Doren. He has a Ph.D in history from Columbia. He is executive editor of the "Great Ideas of Today". He's a fellow of the Institute for Philosophical Research. More to the point for today's discussion, he's been a member of The Paideia Group, a group led by Dr. Mortimor Adler, which has recently released a set of recommendations about basic schooling.

Dr. Van Doren will be addressing those recommendations.

STATEMENT OF DR. JOHN VAN DOREN, THE INSTITUTE FOR PHILOSOPHICAL RESEARCH AND THE PAIDEIA PROPOSAL

DR. VAN DOREN: When Mr. Chipman asked me to come here today, I warned him that if I did, I would have to begin by casting doubt, at least in my representative capacity, representative of the so-called Paideia Group of which I am a member, casting doubt on the thrust of what I understand the discussion is, which is to concern itself with improving the passage from high school into college. I'm sure that's a worthy thing to do within some rather limited framework; and maybe all worthy things are within limited framework, so perhaps I should just shut up about that.

Yet I am here to convey to you the sentiments of the group I represent which have been set forth in a book that's now available in book stores if you want to buy it called "The Paideia Proposal", sentiments to the effect that the problems we face in schooling in this country are more fundamental than can be addressed simply by looking at the high schools and saying how could they be better. The fact is it's much too late by the time most of our children get to high school to expect that they will be well schooled; and if that's the case, as I think it is, we have to look way back and start at the beginning and say how can we get them into high schools or the equivalent of high schools with some schooling behind them that will really make it possible to consider how they might go on from there.

I can express the recommendations of The Paideia Group in seven sentences approximately which I will then go on to elaborate; and having done that, I will then say just a word about what I think the implications are in the proposal for college.

The first sentence is, the first proposal or recommendation is that equal educational opportunity requires the same quality of schooling for all children, not just the same quantity.

The second proposition is that quality must be general, not specialized; liberal, not vocational; humanistic, not technical, thus fulfilling the meanings of the word "Paideia" and "humanitas", the general learning that should be the possession of every human being.

Third, the objectives of basic schooling should be the same for all because all have the same elements in their future: the duties of citizenship, the demands of work, and the human obligation of each person to make as much of himself or of herself as humanly possible.

Four, these three common objections can be achieved only by a required course of study in which we allow ourselves merely one elective: the choice of a second language.

Five, the curriculum or course of study in the school which may vary from school to school and from district to district is to be constructed within the framework of three columns, which are set forth on Page 23 of the Volume called "The Paideia Proposal", columns which comprise three kinds of teaching and three kinds of learning that we think should go on from the beginning to the end of basic schooling and which are, in our judgment, integrally related with one another. However, the program or the course of study is constructed in detail, and it must and will vary from school to school and from region to region and from district to district. Such a program should follow these guidelines, should be hung on this framework.

Six, individual differences, especially in equality in natural endowments and in nurtural, or if you please, cultural background, calls for compensatory efforts in the form of preschool tutelage for those who need it and remedial instruction for those who need it; and I imagine that both of these need to be done on a scale which we have barely attempted in this country.

Finally, every school from the first to the last must have a principal who is truly the principal of that school, its educational leader and not merely its administrator or its clerical head.

To go back briefly over these, when we say the equal educational opportunity requires the same quality of schooling for all children, not just the same quantity, we recognize that in this century we have largely achieved the social goal of providing the same quantity of education for everybody. By and large, not everybody, the great majority of our children go through 12 years of schooling. Unhappily, we have only done half the job because of those children, only a few are regarded by the school system as truly educable. Most of them are regarded merely as capable of absorbing information to a certain degree, not of self-teaching, of a life of continued learning which is what a well-schooled person should be, and many are regarded as merely trainable, if that, for vocations or jobs or something of the sort.

These last two are educational dead ends. Neither lead to the life of continued learning, that schooling, if it's to be good, should be the beginning of and not the end; and so we say that all must be regarded as truly educable, as capable of leading good human lives, none should be merely indoctrinated, none should be merely trained, or any assumption violates basic democratic principle and is also disastrous in practice because it creates a nation of a few managers and many slaves that is inherently unstable.

Second, we say the quality of schooling must be general, not specialized; liberal, not vocational; humanistic, not technical, with the following concerns in mind. When we say it should be not specialized, we do not mean to suggest that there should not be specialized knowledge in society or that ultimately all sorts of young persons should not acquire it. What we're saying is that general knowledge comes before special knowledge, that there is a general human knowledge that all human beings ought to have, and that unless they do have it, they will not be able to acquire the special knowledge that many of them may want later on, and nor will they, in our opinion, be able to function in the social and human ways we think they should--not specialized and not vocational if that means for specific jobs. This is both degrading and futile, as anyone who sees the unused machinery in high schools built in the '50's and '60's in this country, machinery that is now obsolete; or if they look at the kids on the street looking for jobs they were trained for in schools that don't exist.

We argue that only general, humanistic learning constitutes a preparation for continued learning for the adjustment to the challenges such we now believe the best people are capable of and which we think all people should be capable of, and we think there is not only an intellectual of moral imperative in that but a social one.

Three, when we say the objectives of basic schooling should be the same for all, because all have the same elements in their lives, we're talking about the demands of citizenship, which are the same for everybody: an understanding of our government and the kinds of participation it requires, a real consent of the governed. There are demands of work that all people have. Each person should be capable of learning and earning an adequate earning, must be flexible in his capacity to do that, not narrowly specialized, must be capable of adjusting to change.

There are many millions of jobs now out there in this country which aren't going to be there in 1990. We ought to have started a massive effort of retraining and re-educating people to take the new jobs that are coming up. I don't think we're doing that. As a corollary to that, by the way, we argue, and we would insist, that as a social goal, the goal of full employment has to be part of a serious program of basic schooling. It is senseless to educate, to school people to take on good jobs with good intelligence and not have any job for them to take on. So in that sense, schooling is part of a larger program.

Finally, among our objectives, when we say that all people have the same human capacities, we mean they all have to realize a full human life which should be intelligent, rewarding, responsible, and pleasurable. Each person should be capable of real human goods of mind, body, and of soul with which as a human being he or she is endowed.

For these three common objectives, we say, can be achieved only by a required course of study in which we allow just one elective--the choice of a second language. The malign consequences of electives in the schools, it seems to me, are too well documented for me to have to talk about them here. You know as much about that as I do. So I think are the efforts, the premature efforts, as they surely are, to specialize in high school children who have not yet acquired a good foundation of basic learning.

In any case, the Paideia framework, as we have set it up and, in our view, includes nothing that is not essential to common schooling, nor does it leave anything out, while at the same time it is a full-time job. So the presence of electives or special courses, except as extracurricular activities, would simply not be possible to accommodate.

Again, basic schooling, as we understand it, includes what everybody ought to know, not what some people are free to know and some not, as they prefer. There are plenty of special things people prefer to know and that they should have a chance to learn in the course of their lives, but not at this point, nor in the course of the common undertaking that basic schooling is.

But lest anyone thinks that we're suggesting a nation of robots or people narrowly trained in some narrowly academic sense of the term, let me assure you that within the framework as we envision it are not only mathematics and science and language but history, art, music, crafts, an understanding of the world of work, many things which we think are of equal importance and which should be integrated into any good basic schooling course of study.

I know you will say some of you will worry about the individuality of children. We don't deny this at all. In fact, we think that it is best realized that individuality in the response to a common challenge not in the effort to invent a unique undertaking. If any of you has attended a university in recent years, you know that in the present system, the wilderness of courses that university catalogs contain, there is an astonishing uniformity of papers, tests, performance, and grades which has a curiously homogenizing effect on the life of learning as we actually practice it. The choice is not real. It is about as real as getting your choice of initials or your choice of color on the plastic toy you buy at the store. This kind of individuality is, I think, spurious rather than real. Ultimately the individuality of each one of us, it seems can only be achieved by the person who has the capacity to create it which requires competence in basic skills and mastery of common human knowledge; and this kind of individuality which, given that preparation, will certainly out--in any case, you couldn't possibly keep it down--will have much more stuff in it finally than the fake individuality which I think, by and large, we now opt for.

Five, the curriculum or the course of study is to be constructed within the framework of learning and teaching which is set forth on a certain page of our book. I have not time here to go into much detail about that; but let me say that if you see the diagram that we have drawn, it consists of three kinds of learnings, and as we say, three kinds of teaching which are reciprocal to one another, go on equally all the time.

In the first column are subject matters: mathematics, sciences, languages, history, geography, social sciences, whatever, which are to be taught, as they must be taught, by the teacher who tells students what he or she knows and which the textbooks and similar materials are resorted; that is, that is the most familiar kind of learning, and it surely must go on. There's no way to convey subject matters without doing that.

But a second column deals with the--and we think this is the heart of basic schooling--deals with skills, with arts, with really knowing how to use the knowledge which is the business of the first column and subject matters to convey. We think this requires a quite different kind of teaching which we like to call coaching because it's akin to what the athletic director or coach does; that is, such a person sees that the child knows how to do the thing that he or she is supposed to know how to do. It isn't enough simply for the child to have taken in a book some description of it. The skill must be learned, and that can't be done without a kind of one-on-one relationship at some point in the day, some point in the week, some point in the year, however it may be done, in the acquisition of verbal skills, mathematical skills, so forth and so on.

Third we think is equally important, something that doesn't go on much in the schools at all, though it does go on in a sporadic way in colleges in the country, an understanding through questioning and discussion of matters which arise in the reading and confrontation with books, works of art, human artifacts of all kinds. This is a kind of give-and-take learning that we think has got to be a part of basic schooling. It is the least passive of the kinds that I have described. The child is the most active in it, and we think that has to go on, too.

Again, in each of these kinds of learning, there's a different kind of teaching. There is what I would call the telling in the first column when we deal with subject matters, where the teacher knows more than the student and says so. There's the coaching which is necessary in the development of skills, where the teacher's object is to make the child capable of doing what the coach knows how to do or the teacher knows how to do, and finally there is the proceedings of questioning and discussion of books and things, where the teacher and the students here are in some sense on an equal level, where indeed the essence of a discussion is that there be something equal between the people who discuss, and otherwise they can't do it, and where the assumption on the teacher's part that there is a real question to be asked and some real answers to be given is vital to the undertaking. It will not work if it is an active manipulation.

Six, individual differences, especially inequalities in natural endowment and nurtural backgrounds call for compensatory efforts in the form of preschool tutelage for those who need it and remedial instruction for those who need that. This recognizes that many children in our society start with grave cultural disadvantages. By the time they get to school, they're already a year behind. It's very tough for such a kid coming out of such a background to keep up with kids who have had--who have, if not been luckier--we don't want to put a value judgment like that on it--have, at any rate, been brought up in the way the school finds more congenial. So we think there's got to be preschool work with lots of kids, maybe with all to some extent.

We also recognize that many children, both for natural reasons and for nurtural reasons, cannot learn as fast as others, that there are differences in degree. While all people have the same human endowments and the same inherent capacities, some have them in greater degree than others, some can develop them more swiftly than others, and so we are willing to say that there must be built into a good system of common schooling a system of remedial schooling to go along with the basic program.

The difference between the remedial instruction we suppose and that available in most places is that the remedial instruction we suppose is that which deficiencies or disadvantages in nurture and nature may require, not deficiencies in the schooling that a child has already had.

Most remedial teaching in our schools today has to be there because the schooling that the children have gotten up to that time has been deficient. They haven't learned to do the things they're supposed to learn, and so you have to start over again with them, and so that we waste an awful lot of time and break an awful lot of hearts trying to make up for the deficiences when in many cases it's really too late to do that.

In France, which has revolutionized its entire schooling system for the entire country in the past decade, up to one third of the time of the school is devoted to remedial instruction on this basis, and it might be that we would have to do as much as that.

Finally, every school we think must have a principal who is truly the principal teacher of that school, the master of it, the headmaster as some private schools call him or her, and not merely its administrative or clerical head. It should be obvious, but it is not always the case, the main business of a school is teaching and learning. The principal of the school must be credible as a guide and a governor in that undertaking. He or she may not and perhaps should not actively teach; but he or she should have at one time taught and taught well and should be respected for the ability to do it. No school we think can be a good school that doesn't have at the head of it someone with experience and experience of some distinction in its main enterprise.

We would add along with that background, the principal must have at least two necessary powers that he or she does not always have nowadays. One is the power in consultation with the faculty and with due recourse for due process of law, the power to hire and fire his faculty or hers, and second is the power to discipline, perhaps if necessary to expel students. No school can operate satisfactorily in the anarchy conditions that prevail in many communities in this country today. Nor can these be overcome without giving the school principal the authority to take corrective measures. We can't fool around with that. It's senseless to criticize teachers and administrators in school districts for not getting the job done in an atmosphere which makes the jungle seem tame; and in many places, that's the way it is, and there's no point in pretending that that can continue to be so if we want good schooling.

If I have just another minute, I will say a word about what this has to do with college. The schooling we envision would make much of what the colleges now do for our children unnecessary because it would have already been done, and that's a good thing because the colleges don't really do it very well. It's no secret that the sort of basic learning that the colleges convey is not satisfactorily done and that they don't like to do it.

The student who has been through the school as we envision it would have abilities, competences in subject matters, in skills, and intellectual disciplines which most of the colleges now barely can manage to instill and which, therefore, they would not have to take up at all. What the program we imagine would make it possible for the universities to do would be to become the specialized institution which they truly ought to be, which they know how to do best and which they can do only with people who have had some adequate background of common schooling; for make no mistake about it, even the universities know, most of them if they're any good, that you can't really get as far as you want to go, except in the narrow sense you can't get far at all, with people who don't know anything when they come there or who don't know anything but one special thing, which the high schools in anticipation of their college life have already tried to teach them.

I guess that's about it for the moment.

MR. SMITH: Thank you, Dr. Van Doren.

Let's have two or three questions now from the panel and then we'll take a five-minute break and come back and open up general questions.

MR. DOBBS: We're so overwhelmed we don't know what to say almost. Let me just start out by asking what are the strategies to implement this kind of approach to education? I assume you are talking about the public schools?

DR. VAN DOREN: Absolutely.

MR. DOBBS: What are some of the strategies that you may have in mind to implement this kind of a program approach in the public schools in this country if not in one state--maybe you're going to concentrate on Chicago--I don't know?

DR. VAN DOREN: Yes. Ruth Love, I believe it's no secret to say, would like to set up a pilot K-1 through K-12 school, two schools, that would serve not only to try this out as a teaching enterprise but to serve to train the teachers who have to be schooled themselves to do it, and obviously the demand it places on teachers is very great, and there has to be some institution where they begin to learn to do it. Now, I think that's one of the things that the pilot school would serve to do. That's one of the functions of the pilot school.

Another one is being set up, we understand, or if the money is available, will be set up in Atlanta where Alonzo Prim is, who is one of our members, is much interested in this also, and I think he's probably nearer to it than Ruth Love is, to getting something going. So the pilot school is one way of doing it.

We have, in anticipation to the question you have raised, in the back of the book we have put out a note addressed to school boards and school administrators and which begins:

"You asked what should we do next Monday morning to get started on the idea of reform of basic schooling"--is this what--we don't have any magic, I have to tell you, but it's like this--we answer one:

"Be sure that in every school from Grade 1 to Grade 12, there are the three kinds of learning and the three kinds of teaching represented by the three columns and see that they interact with one another. Don't start by assuming you don't need them. You need them; you need them all."

Second, among these kinds of learning set forth in the three columns we offered, the requirement of organized knowledge, subject matters as I call them, the development of intellectual skills, the skills of learning, the enlargement of understanding of basic ideas and values, these three things, these set standards of accomplishment that challenge both students and teachers to fulfill the high expectations you have for them. That is to say have some faith that if you undertake to do this, the ambition, the inspiration, and even to some extent the capacities to do it will gradually emerge--will, I think, immediately begin to emerge. There's nothing like offering kids something really serious and interesting to do and find out how serious and interested they become in trying to do it, and so with teaching.

Three, eliminate all the nonessentials from the schoolday; or if you retain them, make them extracurricular activities.

I have myself, and I'm not really well experienced in this, but I have myself attended discussions or meetings in high schools, some very prestigious ones in this country, and sat in on classes, about 12 minutes of which were spent in the matter to be studied. The first 10 minutes were spent in announcements, and the last 10 minutes were spent in figuring what they were going to do next. It was not a reassuring spectacle.

We think, as we say, if you eliminate from the curriculum for specific jobs, not truly vocational training in the sense of training that gives you some understanding of the world of work and its requirements, but training for specific jobs, this could be done at once and would create opportunities that don't now exist.

Introduce the study of a language, a second language, for sufficient time to insure at least competence in it and some understanding of the child's own language.

Eliminate all electives from the course of study except the choice of this second language. There's a lot of second-rate, relatively trivial stuff in the curriculum of most schools these days, and the sense of opportunity that will come if you say I'm going to be firm about that, we're simply not going to do that, except on an extracurricular basis, will, I think, be extraordinary.

As a corollary to that, use as much as possible of the time of the schoolday in teaching and learning; and in some cases restore homework where it doesn't exist; devise if you can in your community preschool preparation for those who need it; and, finally, institute remedial schooling for those who need that.

Now, you may say these are all visionary things that can't be done, that they beg the question, but they are, nevertheless, quite precise objectives that could be set forth.

MR. DOBBS: But, Dr. Van Doren, I assume this is something you would say after you get into the board room. My question was how do you get into the board room. Would you appear before the National School Boards Association Convention and demonstrate your proposal and present it there, would you go down to tell Bell's office and put some money behind it, what strategy would you use?

DR. VAN DOREN: I don't know, but, really, it's not up to us to say how, what the political channels for this is.

MR. DOBBS: You would just put it out there?

DR. VAN DOREN: Absolutely. I think our function can only be to propose to speak for it, to defend as well as we can, to find support for it where we can find it. I, myself, believe--I think all of us believe yes, that it is not a matter for Ruth Love to take up or Alonzo Prim's, that it is a national matter. The Secretary of Education should be terribly interested in this and should be doing what he can to implement it; and if you like, I don't think that's probably the case, but, yes.

MR. SMITH: Mr. Chandler.

MR. CHANDLER: Just a comment and then a question that really follows very directly to the question that has been asked here. I find not only your presentation but the substance of your presentation very interesting, a philosophical view of view. I'm also reminded that in the United States of America, as well as in other countries in this world, that what one generation perceives as excellence, what one generation perceives as essential, what one generation perceives as being trivial, is not automatically accepted by the next generation, and that many of the ideas that are in The Paideia Proposal, in fact, are not new to philosphical discussions of former generations; and I find it also kind of intriguing, although the seven points you have made are not the exactly the same, but they certainly recall to us the Seven Cardinal Principles, and we could make references to lots of other things.

My question is this, is that what kind of tolerance, what kind of understanding would you group really have relative to different points of view about how to achieve excellence in education in these United States.

DR. VAN DOREN: I tended to say we think that the mind and spirit and heart of a child requires these three kinds of learning to go on, and, therefore, that requires these three kinds of teaching to go on; and we even go farther and spell out what we suppose are some of the contents of some of the things that should be done in those ways of teaching and learning. Beyond that, we're not sitting here and telling anybody what the schoolday should consist of, what books should be read, what so-called courses should be taken. I think that we would say that there probably are not 20 different ways to acquire competence in basic science or mathematics or history of language. I don't think it's as various as you suppose. I don't deny that in the next generation or ten generations from now there might be quite a different notion of what good teaching and learning might consist in; and if it does, it does. Certainly we're not going to be around to do anything about that, but I think if we can now say that there are, as human beings, things that all human beings should know, both because they're human and to live in the world as we now have it. If either of those propositions makes any sense to you, then I think that's what we're trying to talk about here.

MR. SMITH: One final question.

Mr. Spraggins.

MR. SPRAGGINS: The proposal is loud; and as I sat here, I wished that all these things could be accomplished. I think if they will, they can. You talked about visionary--it is quite a visionary proposal. I just happened to be thinking about that when you said that because without vision, people perish, so we are told.

I would just like to know, you know, in our climate--Arnold has mentioned about generations changing and what one generation might accept at one time, another one may completely not accept that at all, and I think we're going through that period now where we're just coming out of one generation, the sixties, the period of sixties, where some of these ideas that you have proposed here had a lot of high priority; and we seem to be going through another period where those that be in power feel that we have gone that route, and we don't seem to have gained a lot. Now, I don't think that's the general view by a lot of us who are in education. I happen to think that some of the compensatory efforts and the remediation efforts that are addressed to deal with the culturally deprived, the economically deprived, the poor student have to be in place in order to try and maintain some equity in the educational enterprise.

Given the future as we perceive it now in The

Paideia Proposal, what it appears to be at least for the next decade or so, this appears to be rather a giant undertaking that will require a tremendous amount of resources to pull something like this off. It almost sounds utopian, and I'm particularly interested in that segment of the population--all students generally, but particularly that segment of the population, the economically deprived student. How do you deal with that student in terms of concrete efforts to make them more equitable in terms of the educational enterprise and maintain the level of equity?

DR. VAN DOREN: To take the end of what you ask first, it's indeed with such children in mind, partly in mind at least, that I was saying there has to be preschool work done and a lot of remedial teaching. I think we have to assume from almost a very early age that some kids are going to need help, and that it's got to start right at the beginning or even before the beginning if they're not to become, if they're not to be running last almost from the start, and so, as I say, far from overlooking that, that's fundamental to our conception.

I don't have a remedial instruction program set up for you or a preschool program either. I can't do that, but I'm saying that it should be part of our school commitment to regard those as quite as necessary as the basic course of study.

As to money, we spend an awful lot on schooling now, and an awful lot of it doesn't do very much good. I hate to say it, but I think there's plenty of money in this country to do anything we really want to do. At that point it becomes a political matter of getting it committed to the things you think it should pay for, but I don't think there's any real absence of money.

One last thing, as for utopia, no, I reject that. Utopia is, by definition, is a thing that can never be realized, which is beyond human possibility. I don't think this is beyond human possibility. I think in some perfect sense nobody is ever well enough schooled, no school is ever good enough, practically no teacher is, and so forth and so on; but with that acknowledgment, with that allowance, what we're talking about here is perfectly practicable in some degree; and as far as we're concerned, any appreciable degree of these things would make, we think, a worthwhile difference in common schooling if we've got it. So I really don't think it is a utopian program. We certainly didn't put it forth in that way, if that's what you mean by utopian.

MR. SMITH: Thank you.

Let's take a break and reconvene here in five minutes.

Off the record.

(A short tecess was taken.)

MR. SMITH: On the record.

In reconvening this afternoon at around 1:30, then we'll open up the overall discussion to people in the audience as well as panelists and people who have done their presentations. For the next 40 minutes, though, I would like to give the panelists and the presenters an opportunity to make whatever statements they'd like to make or to ask questions or to respond to what they feel might be other presenters' view, so that we get out on the table a sense the major concerns of the panelists and of the presenters.

There have been during the morning a couple of times when some of the panelists have asked questions having to do with implementation, you know, what do we do next, or exactly what curricula do you recommend, or should the federal government do this or the state government, and, obviously, these are questions of absolutely critical importance to members of the Commission who might be making recommendations to the Secretary or to other people.

So what I'd like to do is to open it up to the panelists and to the presenters. You can make statements if you'd like, ask questions if you'd like, respond to other presenters in general in open and relatively informal discussion.

Do we have anybody who would like to start that off?

MR. WALLHAUS: I guess I would like because I would like to continue the line of comments and questions that we were on in a number of cases before the break, and, again, my comments and questions are very much related to implementation ideas, and I have a question for each of the three speakers.

As far as Adrienne Bailey's project and its objectives are concerned, I'd like to continue to pursue this problem of trying to reconcile the goal of equality with the goal of maintaining standards. There is certainly a problem reconciling that between the secondary and post-secondary levels; but even with entire education, there is a similar dilemma; namely, trying to provide access on the input side, if you will, on the initial side, and then continuing to maintain the credibility and standards of the degree, the credential objective, and somehow through the process of delivering a postsecondary education, trying to reconcile those objectives,which I think you have to face up to the fact, are potentially in conflict, and our challenge is to find approaches of reconciling those potentially conflicting goals. Now, the question is I think we probably would agree that, in the short range at least, we're going to be faced with students who are not adequately prepared in the basic skills to pursue a college education, and that means some form of compensatory, remedial work. One concern that we have in Illinois is how to best accomplish that, who should be responsible for that, and what resources need to be allocated to accomplish it. Should higher education take on that responsibility? Should it be a responsibility that continues to be thrust upon the secondary schools; namely, that if a student cannot demonstrate the adequate preparation, that somehow the secondary schools have the responsibility to deliver whatever remedial work is necessary? Should we use our all-purpose institution, the community college, to fulfill that responsibility, and if so, what do we need to do in your judgment to allocate or reallocate, in the case of Illinois, the resources that are necessary to achieve that?

Perhaps one model is to place that responsibility jointly on higher education in the secondary schools and to set up the necessary provisions for delivering remedial education in a cooperative fashion. I just simply don't think that we can escape the fact that it is going to be needed, at least in the short range.

Marshall, do you want me to make that comment and then pause for Adrienne to say something, or should I just go on?

MR. SMITH: Why don't you pause and see if Adrienne would like to say something in response? That's a big question.

DR. BAILEY: I guess I would start by saying that one of the frustrating things for me is always why is education so complicated, because it's not easy for any of us to sit down in a matter of eight hours and say we've got these problems solved because they're easily defined and we know the solutions that will work and are effective.

I, first of all, don't think that there is a conflict in goals of equality and quality. So that would be the first comment, and I'm concerned about that because my sense is what the message says that is going across this country in terms of the decade of the '80's.

I think that I support the notion that John put forth, and that is to accomplish quality means basically to accomplish equality. That to me is a short-range versus long-range problem, I think, as you said; and there are kids who are in the pipeline, and I think that the important thing is over the next 10, 20 years we cannot deny those kids the opportunity for developing to the fullest of their capacities, and I think that institutional responses have to respond to that generation of young people who through, you know, not necessarily any fault of their own or because of other cultural or racial circumstances, they have not been able to gain the kind of quality skills we want. So that's short range. I think in the long range, though, the issue is how much remediation is the college going to do. So I would be very concerned if we looked 10 years, 20 years, from now and say that this percentage, whatever it is right now, has now expanded to 50 per cent, and so I would support the notion of at the present time colleges continuing this role of remediation. I would further support your proposal, that I do think that this is a shared responsibility, and I remember the Illinois debate well on the remediation issue because I participated in it as a member of the joint committee between the two groups; and in the initial definition of the remediation, I think that one of the problems is remediation was being considered in such a large parameter, that it was almost including people who had very, you know, high grades and were going back for some special training, and that my sense is that now the revised statement makes it more clearly in focus.

So that I guess in terms of allocation of resources, which is the constant question of legislators, where should they invest their money, I mean I think the messages are coming out O.K., and that's to say the colleges now, don't think all the sudden we're going to pay twice for education and that this is going to continue expanding.

Secondly, I think that I see a similar need for investment, though, in what do we know are the most effective practices for remediation that are working, so that we know that the money is being spent well; and if, in fact, the colleges are remediating so well, what is it, I mean what are the instructional strategies that we could impart to the secondary school people that help them in their teaching responsibilities.

So that would be just my response to say we've got to continue to keep, I think, both goals before us, and I do feel that the issue of equity for policymakers in particular is the one that takes particular, I think, leadership at this point and over the next decade.

MR. WALLHAUS: Well, the Illinois debate does continue. As a matter of fact, I might comment on Don Gill's absence. Don needed to run back to Springfield to be involved with a meeting of what is called the Joint Education Committee. It is a committee that is made up of three members of the postsecondary board, the Board of Higher Education, and three members of the State Board of Education, and it is just that mechanism at the policy level that is dealing with questions such as this.

Ray, what I would like to ask you to do is to try to sharpen the definition of the different dimensions of the preparation in areas of math, science, and technology. Is the problem, as you see it, a numbers problem; that is, there is an inadequate number of people being prepared that have knowledge and skills in technology, is it a problem in the context of the needs of the labor force of industry, is it a problem related to the economic development, or is it an adequacy of preparation problem; that is, we are training sufficient numbers of people, however, we're not training them well enough?

I would say, for example, that in order to be admitted to the College of Engineering at the University of Illinois, you must be in the top 10 per cent of your graduating class and have an ACT in the high 20's to even have a chance. It seems to me that preparation, at least in the context of that example, isn't the issue. Perhaps the inadequate supply is an issue, or would you be saying that we need to place our priorities on the adequacy of preparation as a societal general need, that it's not that we don't have adequately trained individuals in isolated examples, but we have a lot of inadequately prepared people in the general context? But where do we put our priorities, in your judgment?

DR. HANNAPEL: One can cite the quantity kind of problem. It's definitely a quality issue, an issue of the quality of preparation, and let me cite you an instance at the higher education where I know your concerns lie.

If you look nationally at the statistics and the number of people who are doing career work or employed in computer science, only a third of those people that are in that pool had training as computer scientists. Where are the rest of the people coming from? They're people trained as chemists, physicists, a large hunk of them as mathematicians, psychologists. In other words, they had sufficient preparation and were at a level of quality where they were able and flexible enough to be able to move into an expanding market, and, indeed, that market would not have expanding in this country if we had to depend on computer science programs. It will not because we do not have sufficient faculty on our college and university campuses to be able to do that. That's an example, and it has to do with priorities.

It's getting to your earlier question to Adrienne on remediation, who does the remediation, should the colleges and universities do this, or should it be done at the precollege level? I think you've got to consider what we know about the nature of the organism and what we're learning about the nature of the organism and what kind of research information we have.

If we decide in this country that every citizen should have capacity in a second language--let's say we were to decide that--it would absolutely be foolhardy to put that off until the college level because we know that people just do not master a second, very few--the majority of people cannot master a second language at that level;

and it has to do with the actual development and ex of the neocortex at a time when that goes on. You kn it's like kids 10 to 15 with baseball cards, memorizing all kind of things, all those neuroconnections that are being made at that time. It's a very, very important time. That's why I am so concerned that a large number of our students, when they're in that period, are not taking any science and mathematics that could expand their development and lay down some of those kinds of connections, not that what we are doing right now is necessarily the most appropriate thing; but there's a timing and a rhythm in development of the organism where some things are just better done at that time.

MR. SMITH: I'd like to follow that question just for a second. The College Board just put out scores for the 1982, Adrienne, or 1981, whatever the average, the median and mean score is; and in Math II, what used to be the afternoon math for those over the age of 40, the advanced placement--well, it's not advanced placement, but the Math II, the average score was 661. Now, that compares to an average score, I guess probably equated 20 years ago, of 500, which means it's a standard division, and three fifths above that, which means that the average person who took that test, if the equations are right, in 1960, the average person who took it, the person who took it in 1960 who scored in the 97 percentile would now only score at the 50th percentile for this group of kids. That's an extraordinary jump. It's an amazing achievement for the nation to move those kids that far. Now, one explanation may be that this is a very different group taking the Math II achievement tests, but I got the impression from you that we had a quality problem in the training in math, and that seems to me to be direct evidence repudiating that statement.

DR. HANNAPEL: Are you talking to me?

MR. SMITH: Yes.

DR. HANNAPEL: There's no question from looking at the nujber of indicators that the top 5 to 6 per cent of students in this country are doing as well or better in the areas of mathematics and science if you look at the AP's, if you look at the achievement scores. That's not where the concern is, and that, by the way, is not where the concern of the Commission is. They have noted in their goals that the educational system needs to continue to provide opportunities for those who are going on to careers in math and science, but they've also talked about another important goal for U. S. educational systems across the board, formal and informal, to increase the opportunities to choose into those and also for just a third area in terms of being conversant, scientifically literate, technologically literate, just to be able to participate fully as a citizen in working and personally in the society; and it's in those latter two areas where the quality issue is really the issue, because I think the indications are that that's where we have been having some major declines.

MR. SMITH: Mr. Spraggins.

MR. SPRAGGINS: We've been getting a lot of information, at least at it particularly relates to the testing area, on the decline in the testing area and the theory that we are now coming out of that decline. There are a lot of theories as to why we are coming out of that decline, and I am particularly interested or concerned in that as we begin to look at the turn-around that appears to be taking place, at least those are some of the indications that we seem to be getting right now, that we may be getting over the hump in terms of that period where our SAT scores were very low as it compared between states and as we tend to be making comparisons now between countries. There's a danger in that, because I think that there are code words--not code words, but I think there's a code in being able to have the public say, Well, we are really getting on top of the situation now, and the standards are being implemented, and we are now beginning to really get back to where we were 25, 30 years ago." Now, that's well and good. I think that, you know, we want to make sure that we've got good standards, and we also want to make sure that our kids are doing well, but we also understand and know that history tells us that we have always done well when the education system and enterprise was restricted, and that being that wealthy kids, the kids that tend to be on the highest socioeconomic level, tended to do better, far better in this kind of situation than kids who did not have that opportunity.

So as we begin to look at the code signals that are sent out to the public as it relates to how the country is perceiving what we are now doing, we've got to be very careful that we win the battle on one one and don't lose the war in terms of the large situation, because come 1990 and beyond, these very kids that do not have the opportunity of wealth, the resources to be able to access some of our better institutions--even higher education public institutions are beginning to be expensive because of the cutoff of financial aid to students--we've got to be very concerned that we don't allow ourselves to be trapped while we close the door on access and we increase the opportunity in terms of the area of having done well or better off in terms of our levels of achievement on the SAT and ACT, and that's a concern that I think we've got to really look at very closely as we talk about quality as well as access, because somebody wins and loses in that ballgame, and I'm afraid that the losers may be the majority in the sense--when I'm talking about the majority, I'm talking about the large masses and numbers of people who don't have the opportunity to have the resources that we'd like to have.

I'm going to say one other thing and then I'm going to be quiet. I was at a meeting last week in Washington, D.C., and we had the Secretary talking to our group, and I was concerned about what the Secretary said. He pointed out a very clear picture in terms of where we are going for 1990 and beyond, and that we are going to be in a very high tech society; and he said to the audience that was sitting there, he says, "I'm not so sure about where you live, but where I live, the kids are buying computers, the families are buying computers for their kids." As I sat there and I listened to him, and I think the vast majority of the people that were sitting in that room did not represent the kind of youngsters who come out of communities whose parents can afford to buy them computers to be able to compete in 1990 and beyond, and therein lies a bigger question of what do we do about that mass of people, that mass of students; and I would like to see that we address this issue, because this is where the real problems are going to develop. In Wisconsin, in 1990, it's already projected that we'll have a shortfall in skilled labor in the high tech areas. How many of these young people and the masses are we going to be able to direct into the sciences and into the math and be able to do the job that we need to have done.

MR. SMITH: Do you want to respond to that?

DR. BAILEY: I'd just like to make two points. One is to describe the experience that I recently had. Last week I was in Puerto Rico speaking to a group of high school and college people about the Equality Project; and in my eagerness to try to know as much as I could before going down there, I wanted to know what the college admissions testing situation down there; and in Puerto Rico, they don't use the SAT. Students can take it, but they have a Spanish version of the SAT called the PAA.

So I looked at the scores, and I said, "You show a decline," and they showed a decline in, a major decline, in English as a second language. I said, "Why isn't this headline news there?" It's interesting because the college board leadership in Puerto Rico, which sort of operates semi-autonomously, has conscientiously made a decision to protect the use of SAT scores as measures for evaluating the schools for the public in terms of what they're doing and what they're not doing; and I think that that's something that has occurred in the United States which is sending many of the messages that you know address that. You can judge the quality of your school by these scores. That's not necessarily true, and, secondly, therefore, we cannot fall into the trap that says because the scores have stabilized over two years and now show three points' difference, that that means, you know, all the problems are over, so don't worry any more. So I think that's a public interpretation issue that you hit right on target.

The other point you made, I just--I have to commend this document to everybody, this "Profiles of College Bound Seniors" to spend time and find your state and analyze it, but the annual parental income of students who took the test, for whites over $50,000, 12.8 per cent; for blacks, 1.8. I think that's just a very fascinating variable to show you, you know, where the group is who is taking college admissions kinds of tests.

DR. HANNAPEL: Is that of the total population?

DR. BAILEY: Those taking the test, obviously, not of total high school students. It has a differentiation, you know, according to income, under 6,000 and above 50.

MR. SMITH: It's not a random sample of high school graduating seniors at all. The East Coast takes the SAT's more than does the rest and so on.

Mr. Rustad.

MR. RUSTAD: I'd like to just state a conviction and then pose a question for the presenters and the panel as well.

It seems to me if we are serious about improving quality in the schools, then we have to be serious about implementing meaningful standards and no kidding around on that score. I think, if we don't do that, we dilute ourselves, and we mislead students and the children. In that regard, I think it's going to require some political leadership to impose or persuade local school boards that they ought to have meaningful standards with respect to performance of students. I have a colleague here from Minnesota who may take issue with me, but it seems to me there's a real role for chief state school officers and state boards of education in this area with regard to the matter of specifying standards and enumerating curriculum requirements that have to be met before students can proceed or graduate from secondary education.

Now, in Minnesota, and you can correct me if you want, but it seems to me our chief state school officer and our board of education have been very reluctant now and in the past to address this issue of specifying standards and, in fact, creating some tension with local school boards, because the local control mentality is very pervasive in Minnesota, and I'm sure it is in other parts of the country, but it seems to me we need some political leadership in this regard, and I'm wondering what the views of the presenters are with respect to the question of what state school boards can do in this area.

DR. BAILEY: Let me speak to that since I'm a former state school board member and a past president of the national organization. From our own perspective of the Equality Project, I mean that's the group that I keep in constant touch with; and, in fact, we're talking with the chiefs about helping us to do some work on what the states are doing around the country on articulation related to standards and precollege prep, so that we might begin to get into the hands of policymakers, you know, some information which would help them make some decisions. So that's one.

Secondly, I think that state board people need to know--I don't feel that my former colleagues know a lot of this information about what does the data show and what are the needs, and so I think that that is a responsibility upon the state agency staffs to begin to feed them that kind of information and raise issues with respect to high school graduation standards. Some of that is occurring in some of the states, I would say, and there are some task forces now at work which are attempting to rewrite state requirements. I know that's true in Texas--I've seen the document. I know that's true in some of the stuff the Illinois board has done, and I think that it suggests a need for the articulation. Beyond that, I think it takes bringing the larger community into the action, and that's why, for example, we're engaging business in our discussions and dialogue, so we can try to garner us a large support, you know, for school boards taking positions on these matters. So that's just from the perspective of our project what we're doing.

MR. SMITH: Anybody else?

Dr. Hannapel.

DR. HANNAPEL: Certainly I think standards stated at some level are very important and for understanding on the part of all the parties that are involved in education, and I would indicate that it needs to go wider than just the parent, the teacher, and the student; and that it's very important for the larger community, including the business and industrial community, to be quite aware of that. I think, however, where that happens is very much a product of of the history of development of education in this country and aren't necessarily the basis for the level of output as judged, for example, by the national assessment either in mathematics, science, or in the verbal areas.

The northeastern United States is typically a leader in the score areas. Many of those states do not have any state requirements. It is local towns that really set that. So it's a complex problem. That's what I'm trying to say. Standards are very important. How you do it is very much dependent on historical accident in some cases.

MR. SMITH: Mr. Dobbs.

MR. DOBBS: I'm trying to piece out in my own mind the interrelationship of all of this, the vein that we, through the presenters--I'm sure there is one. I just haven't put the needle into it yet--The Paideia Proposal, the College Board, and the National Science Foundation, and I assume the Excellence in Education Commission would also be included. Am I to assume that we're here because there's a relationship between the four thrusts, and we should somehow decided what that is, and then come up with some kind of comprehensive answer to education for the minors and beyond, or are we just listening to what each of them have to say and we go back home and business as usual? My problem is--I know there is a relationship, I'm sure there is. I guess I'm concerned for my own edification and for that of my agency and state as to what should we recommend. Will this hearing--Adrienne says she has been to others, so I guess there are hearings all over the country--will the information be pooled somehow? It's a process question in a sense, but I also have one other question.

MR. SMITH: Sure. I think the first part of your question, is there a relationship between these three, I think you're right, there is. I don't think it necessarily makes a grand scheme, but I think they were chosen as being representative of a number of different efforts around the nation to try to deal with issues of high school and quality of education, and these are three good examples. They span areas of--they're not necessarily separate. They're not necessarily interrelated. They're not necessarily chosen to make a full picture. That's No. 1.

No. 2, the proceedings of this discussion are being transcribed, and they will be sent to the Commission on Excellence. They will be read the commissioners and by the staff of that; and, presumably, if there is some wisdom in our discussion, it will be incorporated into the report.

DR. BAILEY: Mike, can I just add to that since I participated in the last hearing?

I think that the hearing, the formal hearing that the Commission held in June, as I observed it, it was primarily involving--most people came from out of this region, and they spoke about the issues of admission and did it in a more testifying sort of manner, and that particularly this region--I don't see Clark here, so that's why I'm doing this--I'm responding why you're doing this, Clark--there was a desire to have more of an exchange and a dialogue with local people about the issues related to transition in college prep that could go along with the rest of the testimony that the Commission members were receiving on this matter, and so that it was more from a local practitioner sense: what are the problems, what are the issues, et cetera. Now, I don't know if the other people here, Clark--I got a copy from Cliff Ailman of the summary of that last Commission hearing. I don't know if that was shared with the rest of the panel, but it digested what were the results of that earlier testimony and what points were raised for consideration by the Commission as they come up with their final recommendations in their report.

MR. DOBBS: You said the magic word--and that was "college prep", and you said it many times in your presentation today, and it has been mentioned. Yet in listening to Dr. Hannapel, he speaks of this issue of the math and science and decrease of the societal--it is not necessarily something that is concerned throughout the country with the nature of us as a group of people--I thought I heard you say that--and listening to Dr. Van Doren, he looks upon The Paideia Proposal as humanistic learnings of all people, irrespective of their future goals should participate in, whether it's college or not, that it's just good learning. So where do those two stand in terms of college. Should we look at one or the other or both, the National Science and The Paideia, as "preparing young people for college", or should we not do that and look at what the SAT scores are all about and the ACT scores as the standards? It's the coalition I guess I'm still trying to get it. I'm not saying it's hid--it probably is not. I may be preempted. Maybe as a result of all the dialogues, we'll eventually come up with some kind of an answer, but where do we stand, because I don't hear you talking necessarily about college, although it could be.

I don't hear you talking about college necessarily. Adrienne, of course, is talking about necessarily college. So do the two support the other or the not?

DR. HANNAPEL: I'm sure John has something to say to this, but let me make a distinction. The ACT and the SAT are a select group who self-select, approximately, with the SAT's, a million of the upper

MR. DOBBS (interrupting): I'm familiar with both, yes.

DR. HANNAPEL: O.K.

(Continuing) You'll notice in most of the data that we have here, while we mention the SAT's, we're much more likely to quote things from the National Assessment of Educational Progress, because it is only there that you really capture information on the population at large; and I think there is no question about it, we need as a nation now--there's personal fulfillment and satisfaction--but as a nation, we need to do a better job, and it's a quality job, for all our people. We aren't doing it now. I think there are a number of indices that indicate--

MR. DOBBS (interrupting): College or noncollege.

DR. HANNAPEL: College or noncollege.

DR. VAN DOREN: In fact, if we do it well enough, the question of college might be almost moot.

MR. DOBBS: That's right.

DR. VAN DOREN: Because much of what we've got in college academically would, in our scheme of things, be got in basic schooling; and college would then become the university where specialized training in various fields, professional education and so forth, would be appropriate to undertake; but the young person educated in these terms would not only not be a second-class citizen because he hadn't gone to the university, he or she would be immensely better schooled than even most college graduates are at the present time, I think, so there would be implicit in what I'm talking about is, yes, a hell of a change in attitudes and social assumptions and even social status. I'm not for a second suggesting that we don't have to have higher learning, but I'm saying this higher learning ought to be higher. It ought not to redo and give you the basic stuff that you ought to have had all along and never did get.

Most of our educational system as we go up the line is devoted to doing the stuff that wasn't done in the previous stages, you know, we're terribly repetitious about that--we have to be because it doesn't get done.

MR. DOBBS: Would not the choice of higher learning become less of a problem for young people, then?

DR. VAN DOREN: I think so. I don't know what you do about the social status question. I mean in a world where you have to have an advanced degree to get a certain kind of job, I don't know what substitute for that there could be. I think you have to trust the substance of the schooling that one would get in these terms to make its own impression.

MR. DOBBS: Universities would be opposed to your proposal, I would think, in the long run?

DR. VAN DOREN: No, I think they would be delighted with it. It would be free them of their burden of acting like, of providing what, in effect, is basic schooling.

MR. DOBBS: But their fees is what counts. If they don't have live bodies, you know, the University of Michigan has something like 40,000 students, and they fill up their stadium every Saturday. They couldn't afford not to do that.

DR. VAN DOREN: I'm talking about academically or intellectually. I'm saying I think this would free them of a burden--yes, I don't know what they'd do about their buildings.

MR. SMITH: It's 12:30. We're going to reconvene at 1:30, and Mr. Chandler and Mr. Waddick will have the floor then. They're ready to say something, but I think we ought to close it off now and be back in exactly one hour. At 1:30 the audience will also be invited to participate.

MR. CHIPMAN: Could I add a couple housekeeping things?

MR. SMITH: Sure.

MR. CHIPMAN The cafeteria is at the bottom of the stairs behind us. There is also a restaurant with libations included in that restaurant directly in front of the stairs, so you do have a choice.

I've been told that briefcases are all right to leave in here. You might very well want to take personal valuables with you.

(Whereupon, at 12:30 o'clock p.m., the conference in the above-entitled matter was recessed, to reconvene at 1:30 o'clock p.m., Wednesday, October 6, 1982.)

AFTERNOON SESSION

1:30 p.m.

MR. NEWMANN: I think before we adjourned for lunch, there were at least two people at the front table who we promised would have opportunity to make some comments; and after that, we'll open it up to everyone.

MR. SMITH: Let me make one announcement first.

We're going to shoot for a 3 o'clock closing. I think a number of us either have to get out of town; and I think if we go hard until 3, I think we can get a lot accomplished.

MR. CHANDLER: I was just going to make an observation. It seems like the timing of things are never as good as when you have it right at the point, but I do recall what I was going to at least make a comment about or make an observation about.

In terms of the presenters this morning, which are examplars of some quality things that if they could happen across the United States of America in all schools would be, I think would really be tremendous, and I think most of us would agree with that.

What was going through my mind was in trying to follow up with a comment that you were making is, you know, how does all this fit, how does some of this get done, how do we do something about it; and what came to my mind was a little note that I wrote down here that I picked up from Mr. Van Doren; and at the end of his comments where he was saying, "Well, I really think that a lot of this is a political matter," and as a matter of fact, I think that that is really where it is. If we think just a moment about the governance of public education in these United States, either elementary or secondary or vocational-technical or public higher education, most of the decisions that are made, perhaps almost all of the decisions that are made, fall within the political arena, and those political arenas are either at the national level, or they're at the state level, they're either at local locals for elementary and secondary; and it seems at least to me in part that if we are to move forward toward excellence in education in these United States, that those of us who are professional educators have got to be realistic about getting into those political arenas to help those people who have been elected as representatives of the people of these United States, either at the national level, either as congressman or as senators or presidents, or those that are elected at state level government, or those elected within counties or those elected to serve on local boards of education, that a great deal of what those people need, or what they need from us is the kind of information that's been given in the form of what these people have presented here this morning and much more than that because, as a matter of fact, these people have got control of a certain hunk of financial and, maybe directly or indirectly, human resources; and if we are to achieve excellence in education, we do need a certain amount of financial resources; and I would agree with Mr. Van Doren on one hand, there's a lot of money being expended in public education in these United States, and we could do a better job with the money that's currently being expended, but I'd also make an argument that if we are to achieve excellence as we know what excellence ought to be by various people's definitions, that the amount of financial resources that are being given education in this country is falling far short percentage of what's being given to education in other countries, and all one needs to do is to take a look at Japan or take a look at West Germany; of if you don't want to take a look at those countries, take a look at Switzerland, take a look at those countries across this world who have placed a certain value on the importance of education, and the importance of education as a cornerstone, as a foundation, if you will, for the economic base, for what's good for human beings.

I think that one of the things that maybe has put us into the condition that we are in the United States of America right now is that, as a people, as a total society, we are not valuing education to a very large extent, and you could get all kinds of examples. We were talking at the lunch table this noon--Madison, Wisconsin, is not the worst community in these United States. It's one of the better ones, and I'm not opposed to the fact that in Madison where the transportation system is publicly owned, that a bus driver can begin at a salary of $19,300. That's fine. Maybe it ought to even be greater than that; but at the same time when I look at an elementary or secondary school teacher who wants to come into the school system in Madison, which is one of the better school systems in this country, that the beginning salary for that person is $13,100. Now, I think that that speaks to the fact that as a society what it really says is that we are not valuing education. We're not placing a very high value on education, and I don't think that we're going to move towards excellence in education until we can at least as a society put some value there; and in our system, in our form of governments in this country, I think that this vicious cycle that we're caught up in, at least, in part, those of us in education have got to give recognition to the fact that decisions that affect us as educators are political decisions, and we've got to somehow become part of that political arena.

DR. VAN DOREN: The disparity you mention may be merely testament to the fact that the bus drivers union is stronger than the teachers union.

MR. CHANDLER: I think it's more complex than that.

DR. VAN DOREN: I do, too, but I think that the reason you can get teachers for $13,000 is, in part, that people are willing to do that for less money than they really need. The reason they're willing to do it is that there is some intrinsic reward in doing it, and I think they recognize this.

I must say I think we have a right to remember that something like that is at work here. If you speak of the political problems that lie before us, of course, they are straggering. In fact, if one looks at it only with that in mind, one hangs one's head and goes home. What can you do against the array of vested interests who might want the status quo to be maintained; but if there's any give in the system at all, and we must assume there's some give somewhere, that it's not absolutely iron;because if it is, nothing can ever change--if there's any give in the system, I think the force against it is the intrinsic interest and satisfaction that this kind of undertaking involves. I think those groups, if there be any such, who are interested in maintaining the status quo, are interested--are not happy with what the've got--I have not met anybody who is really pleased with the state of public education in this country at the present time. There may be some janitors union who likes the money it gets or something like that, but that's on the fringes of the damn thing. I think we've massively unhappy with what we've got, and I think it's partly because a good proposal or set of proposals would, I think, seem more interesting, more hopeful than that, that we might expect some give in the political situation. Now, this may be a pipe dream, but I think it's an element in our deliberations that we can afford to take into account.

MR. CHANDLER: Let me make just a couple of reactions or comments to that.

I think, as a matter of fact, that it's not so much that the general public really knows why it is so disenchanted with public education as it is a matter of fact that within this country the only social institution which exists which is close to the masses of people, all of the people of the country, is the social institution we know of as the public elementary and secondary school; and that when one holds meetings at the local level, whether it's in Hazel Green, Wisconsin, or Madison, Wisconsin, Milwaukee, or Siren, is that one finds a great deal of difficulty in trying to get from those people what it is that they really don't like about public elementary and secondary education, and my suspicion is--and it's only a suspicious--my suspicion is is that because of the current economic condition that exists in this country, that those people don't have anything close by to attack. The only other social institution, if you're willing to call it a social institution, which is near by is the local church; and most Americans are not likely to attack the local church. So the only social institution that is right there to attack happens to be the public elementary and secondary schools.

And isn't it interesting if you begin to talk to those people who actually have children in those schools, that those people, by and large, are very satisfied, not that they should be, but they're very satisfied and are very happy and will talk great things about that school; but let's keep in mind, at least in Wisconsin, that there are only 25 per cent of all of those adults who have children in school, 24 per cent in Wisconsin. So you've got 75 per cent there that are caught up in a certain kind of economic factors and and conditions. They don't like the fact that their property taxes are going up when enrollments are declining and on and on and on. So that's the institution that they can strike out against, and that may be manifested in saying we don't think the schools are doing a good enough job in reading, writing, and arithmetic or whatever else it may be-- again, not that we can't do much better or should be doing much better; but the truth of the matter is, at least in Wisconsin, that in terms of those kinds of tests where we have moved into statewide assessment in those and so, we are better. Even knowing we are educating more than we did

20 years ago, we have higher scores in those areas than we did 10 years ago, than what we did 20 years ago. So that I think, in part, we're kidding ourselves that the state, if you will, of what's wrong with public elementary and secondary education is not it at all. It's something else that's much more pervasive; and I believe that if we're going to turn some of this around, that we do need to give attention, we do need to give attention to political decisions that are being made, and I'm not talking about partisan politics--I'm talking about just political decisions--local board of education, state, federal government, and so on.

DR. VAN DOREN: I concede all that.

MR. NEWMANN: I'd like to have some other people join in.

MR. RUSTAD: A question for Mr. Van Doren.

I find your proposal to be very persuasive and one which I guess I kind of endorse. It makes a lot of sense to me. Is there any place in the country that you know of, a school anywhere that's put in a program like this or some aspects of this program, is there any live, real test out there that you have looked at or tried to evaluate which would give some feeling about the efficacy of your design, or is this just kind of common sense--

DR. VAN DOREN (interrupting): This book has been published not quite a month, so we can't claim to have had any effect yet. I can only say that there are reported to be, and I can only put it in those terms, there are reported to be in works, implementations, at a local level of schools that will try and do it. Now, that's going to be a kind of an improvised thing. The implications of this in terms of the education of teachers, for example, or, indeed, of the changing of the tax structure are formidable.

I think it's probably going to start with somebody saying let's set up a school and see if we can't do some of this, and, yes, that is certainly going to happen in at least two places that I know of and probably more. We would like--because the pilot school is a distortion of any undertaking because it is so special, you know, there are pilot schools everywhere, and what does that prove--you can always get one school to do something. We would like a slightly larger entity of school district, for example, if we could, to do this, and there is some hope that that might happen, too; but I can't say that I know I can give you a schedule of realization.

MR. RUSTAD: This is a model?

MR. VAN DOREN: It's a model, yes, but I think it's a model that anybody can plug into at any time and not perhaps wholly at first.

MR. NEWMANN: Mr. Waddick.

MR. WADDICK: I don't wish to walk away from this dialogue being identified or recognized as a pollyanna bureaucrat from the State of Minnesota. There are some things about public education in our state and your states and throughout this country that need improvement and demand improvement. However, I am more than vaguely troubled by language such as this from Page 4 of "The Paideia Proposal":

"We are all sufferers from our continued failure to fulfill the educational obligations of a democracy. We're all the victims of a school system that has only gone half way along the road to realize the promise of democracy."

I'm not sure whether we're half way, 75 per cent, 90 per cent, 92, 96, or 102; but I am troubled by the continuing premise of, which seem to stimulate some of Secretary Bell's well intentioned efforts to pursue excellence through this quest, it would seem to be rested upon the implication that we actually are confronted with a failure in public education in this country today. There are few countries which took upon themselves the responsibility and the opportunity to educate a total populace, I think, as early and as effectively as this country did. I can at this point only bring some local perfectives, which is Minnesota, into the continuing portion of these remarks. Each of your interestingly carries your own particular bag into this discussion.

Ray, you are concerned with science. I am concerned with science also; but when I go to my science specialist on the Department of Education staff on the Minnesota Department of Education who has labored there for 18 years and say, "Dick Clark, how concerned are you with science? Are we really in terrible trouble?" and Dick says, "Well, as I told you earlier today, we have 85 per cent of our kids pursuing voluntarily at least one year of secondary upper level science." "Well, how do the numbers compare?" We have more kids taking science now in that state than we did ten years ago.

I go to the mathematics specialist, and I say, "Are we in terrible trouble in math?" and David Dye, who happens to be that person who responds, "No, we're no. We seem to have an appropriate percentage of youngsters who are pursuing upper level, secondary mathematics." Minneapolis-St. Paul happens to be, as most of you know, the computer center, I believe, of this country, and, therefore, we do have a high tech society, and those youngsters are needed.

I become concerned, Adrienne, about your apparent need for improved capacities on the part of young people who are entering institutions of higher education. I can't speak to the national statistics; but in Minnesota, we have 56 per cent of our kids who graduate from high school who are pursuing postsecondary education. I am wondering, mathematically, at what level you can reasonably expect all cated upon an adequate knowledge of the fact that education in many portions of states and communities around this country are being effectively delivered. I say again yes, we can improve, but I'm not sure that we can improve to the degree of satisfacting all the detractors that seem to come forth periodically in the 28 years that I've committed to this profession.

MR. NEWMANN: I would like to formally open our discussions to member of the audience and invite you at any time to share any comments or questions that you may have. If you can, we'd like you to use the rostrum up here. Feel free to walk up at any time, and I'll be happy to recognize you.

Yes, sir. Would you please identify yourself.

MR. DUDDY: I'm Frank Duddy. I'm president of the Association of Independent Colleges and Universities of Ohio.

I'm sorry that neither the Superintendent of Public Instruction, nor the Chancellor of the Ohio Board of Regents in here today. I think that we have begun or are beginning, if you will, in the direction of cooperation between the public elementary and secondary system and the postsecondary system in Ohio, public and private, in the direction of the work performed by a joint commission on articulation between elementary and second schools, on the one hand, and Ohio colleges and universities on the other. These two entities remarkably--and this is gratuitous, on the side, did not speak to each other for probably ten years; and coming from a neutral corner, I grew a little weary of carrying messages back and forth from the superintendent to the chancellor and back again. They finally got it together. and they put together a commission of people from both sectors in the higher education field and mainly the elementary and secondary institutions put together a 12-point system which makes pretty good sense. I don't think I need to tell you what it entails, except that in many respects it looks like a return to the old Carnegie units that students will have three years of English, three years of math, two years of foreign language, et cetera, et cetera, in order to be fully qualified for entry into what is still remarkedly and on many counts an open access sytem in the public sector--I don't think that's going to last very long.

I was, in any case, bemused, I think, to note the shortcomings of the plan--and there are many--how, for instance, are you going to find someone who is fully qualified in French to teach elementary and advanced French at Frontier High School in New Matamoras, Ohio, in Monroe County, about 30 miles up the river from Marietta, for crying out loud. It "aint" likely and it hasn't happened yet. So that the shortages as far as they go are still extant in qualified people, and I am sure it will remain so.

I am much interested in the presentation by Dr. Van Doren. "The Paideia Proposal," it seems to me, is admirable. Unfortunately, it is most apt to happen in the affluent suburbs, Dr. Van Doren, like Upper Arlington, Ohio, and not the Frontier High School and New Matamoras, Ohio, where I think we are already a considerable distance down this road in the requirements of solids. Our kids take four. In Germany, I noticed when I was over there last spring, they take eight solids. I mean solid solids, too, not general science, for crying out loud, or a lot of things like that where they jump over the surface--in any case, the idea I think is admirable, and I do hope you will persist.

I think that we have come to the end of the road--this is my final remark, Mr. Chairman, and I'll sit down--where we can kid ourselves that we can string along without the kind of structured educational system in this country that's prevalent in Europe, and particularly in Germany. We don't need to persist much longer in fiction--and I think it is a fiction, that everybody is equal even if proven otherwise, in this country as far as educational capability is concerned, and I think it's high time we stopped this nonsense and get with it. Let's, for heaven's sake, separate the able from the unable, or the unwilling--probably more unwilling than unable--at the earliest possible opportunity, and do what we can for both sides.

Thank you, sir.

MR. NEWMANN: Thank you.

I'd like to use this opportunity to inform everyone here that--most of you probably know, but there are many projects in progress around the country working on problems of the high school, and there will be an invitational conference in November at Wingspread which is sponsored by the Department of Education, the Kettering Foundation, the Johnson Foundation, and the College Board. The Wisconsin Center for Education Research, which we represent, was asked to do an overview paper of the various efforts going on now nationally focusing on the high school, and we've completed that paper which attempts to describe briefly some 28 projects currently in progress and to put these in a larger perspective of some of the issues involved in dealing with the study and the improvement of the American high school.

If any of you present today would like copies of that review, if you would be kind enough to just write your name and address and leave it with me before you leave, we'll be glad to send you a copy of that.

MR. DOBBS: What are the dates of that conference?

MR. NEWSMANN: The dates are November 4 to 6.

DR. VAN DOREN: Inasmuch as some of the last remarks were addressed to me, perhaps I should reply to this extent, and say that while I recognize that there is some greater likelihood that this would be implemented in the affluent suburbs than elsewhere--I'm not too sure about that, by the way, because we step on some affluent toes--but while that might well be the case, that is the, in my mind, the standing argument for having a national policy on education--to redress the balance, if the balance is unbalanced, between school districts that cannot afford what ought to be done and those that can, that don't have the resources, where teachers don't exist, couldn't pay them to come, so forth and so on.

I would only add to that that I don't think any of us envision a set of specialists in subject matters somehow being assembled and teaching basic schooling as if it were a university education. I don't think it has to be done at quite that level. I don't think we need to imagine that you could get someone with a certificate from the LeSailles to come and teach French. You obviously have to know some French, and you have to have an interest in French and be more or less able to pronounce it acceptably, but I don't think it requires a person of the sort you may have imagined. We're not aiming for that kind of expertise. In fact, one of the things that we like to say among ourselves is that in the good school that we like to think about, that people would teach more than one thing. We would like to avoid the specialization in teaching which leads to the kind of fragmentation of a course of study that we're trying to get away from.

MR. DUDDY: Believe me, sir, I'm not accusing you or anything.

DR. VAN DOREN: I know you're not. I'm trying to be helpful in the situation in which you say you find yourself.

MR. NEWMANN: Mr. Dobbs.

MR. DOBBS: Let me get back to the equity issue. It's unfortunate--and in all due respect to Dr. Adler--it's unfortunate that he chose the phrase that he did because it gives the proposal the appearance of eight-headedness, if there's such a word, you know, some sort of elitish, high-falutin--do you know that term "high-falutin", it gives you that deception, I think, the way the newspapers carry a proposal, the way it's conveyed--and most people will not get the benefit of this kind of sentiment, and you can understand that. So how can you, John, deal with the avoidance of this being a--at least that's what I thought the gentleman from Ohio was getting at also--of it being a program that really is designed for those who already have an elitish kind of effort as opposed to something that really is beneficial to all children?

DR. VAN DOREN: Well, you can read it.

MR. DOBBS: Most people don't read it, though, you see.

DR. VAN DOREN: Then I don't know what you can do. I mean I think if you are talking in terms of imaginery, yes, if people are offended by the use of a Greek word or find that, you know, was somehow unintelligible ipso facto and are going to shut off at that point, I don't know what you can do; but if they're going to read it at all or listen to any exposition of it, I think--I can't imagine a more eloquent witness to the idea that this is not the elite, it's not for some, it's for all. It's said over and over and over again on practically every page. Now, I don't know how you are going to get the message if you won't listen to it, it's true. In other words, it takes two for such a thing to happen--the speaker and the one spoken to; but I don't think there can be, in fairness, I don't think anyone can say that there's the slightest ambiguity, that there's the slightest fudging, that there's the slightest funny business in this book on that matter. Maybe we're wrong on everything else, but, by God, we're clear on that one.

MR. DOBBS: How can you convey it, though? That's what I--

DR. VAN DOREN (interrupting): I don't know without talking and having people read and having people listen. I think that's how anything gets across. To tell you the truth, had we been able to think of another term that would have conveyed what we wanted to convey, we would have happily found it, but we honestly didn't; and we went for this one precisely because it was one that had to be defined so you couldn't read it unless you knew what it meant.

MR. DOBBS: It's some more alphabet soup kind of a thing.

DR. VAN DOREN: Well, something. At least it was not as ivory towered perhaps as you might imagine it was. We considered a lot of other terms. We don't have one for this, and there are some coinages in here, I think, that are important. One is schooling instead of education, because we reserve education for what goes on in your whole life, not what goes on in the first 15 years of it.

MR. DOBBS:I thought one of the things it would say would be that one of the things you could do would be to make sure that it is well publicized that the proposal is being implemented in schools where you have a high percentage of youngsters who traditionally "do not do well", yet it can apply to an group of students. It doesn't make any difference as to their background, color, anything like that. In other words, if it works, then if it works with any group of students--

DR. VAN DOREN (interrupting): I might tell you something on this. Mr. Adler, who has spent an awful lot of time on these matters in the last four years, has, among other things, made himself available to teach seminars on some kind of great books to high school students anywhere around the country that asks him to come; and some of these--these are selected groups. Some of them are the best students, some are the middle range students, some are the less distinguished students.

The only cut-off point that he's found--and it is a serious one, by the way--and in a way, it's the testament to the need of this kind of schooling if you're going to have the sort of discussion he wants--they have at least to be able to read. That is to say below the point at which they can read a book, they can't come and talk about it, and that happens somewhere on the curve, on the continuum, you know; but anywhere above that, the difference in academic standing doesn't seem to matter once they get into the club.

MR. NEWMANN: Mr. Spraggins.

MR. SPRAGGINS: I was interested in what the gentleman from Ohio was saying earlier, and I'm still trying to clear up some of the things he said about equity and hat that means in tax groups, and I'm just not quite clear.

He said a lot about our ability to be able to achieve education at certain levels--I guess those who want it, those who don't want it, those unwilling. There was a lot of adjectives that were thrown out there that I'm not quite clear on. I would like for him to respond to that, elucidate that a little bit for me. The other thing, in terms of The Paideia Proposal, the concept itself, is a fascinating concept, is a fascinating proposal in terms of what it proposes to do.

Now, when I think about that and when I think about all the things that you have said today that's included in there--I want to get to the book as soon as I can get back to my office to order it--I also have to think about the implementation of that; and when I think about implementation, trying to implement that in our society as it is structured, as our educational system is structured, I perceive some real difficult hurdles to overcome in trying to do that, and I say that because our government has not taken education on as a national issue as other countries have.

I attended an educational conference, an international education conference, this summer, and I was a little bit appalled at what was being done by other governments, and they've taken on this issue as a priority within that government. It would seem to me to implement what we would attempt to do here--and as I think about that total structure, the government structure, where there is a national priority given that particular area of activity, it would be more likely for it to be achieved or accomplished. Trying to accomplish and achieve that in the structure that we have through our local structures, where there's all kinds of ideas and philosophies, et cetera, et cetera, across the spectrum, it would be very tough, and I think about that in the context--and this may not be a good example, but it's the best one I can think of--in the context of the implementation of civil rights issues that affect education and other issues that we are concerned about, we know, and I know certainly as a minority, that I feel much more comfortable with the government moving out in front on some of these issues than I feel in terms of them being dealt with perhaps at local levels, not that people are not that well-intentioned in terms of what they do or how they would propose to do something; but I'm not just too comfortable yet that even in the implementation of the Paideia Proposal, that without the proper governmental support from a national perspective, that we would be able to achieve what we would like to achieve, and perhaps you can comment a little bit on that as you--I don't know whether you have looked at or you've thought about other educational systems in other countries in terms of how this might be implemented or even, in fact, whether it was being done--I'd like to take this question a little further--maybe something like this is being done in other countries as opposed to being done in different districts within the United

6 States--

MR. NEWMANN (interrupting): Can we take the questions one at a time?

Mr. Duddy, do you want to respond to the first question?

MR. DUDDY: Frank Duddy from Ohio again.

Mr. Spraggins, to respond to your question, I'm going to respond to that and then level a charge, if I may.

The response to the question is simply that some students, at whatever level and preparation for college should begin--I meant to say this before and I forgot--probably at the fifth or sixth grade and not at the tenth of the eleventh grade are more able and more willing to undertake to wrestle with abstract ideas than other students. Some of the less able may be made more willing, but there is still going to be gradations of intelligence and application and diligence and interest and all those other good things. Whether we are sufficiently egalitarian or not, it doesn't really matter. We cannot really overcome those basic differences of fundamental ability and interest.

The other thing I want to point out--and this has nothing to do really, except with the latter part of your response to Dr. Van Doren--it's too bad, really, that the federal government has chosen to fall back to a level of low priority for education--and, Clark, I'm sorry to have to say this, but I think it's true--beginning with Terrill Bell and coming on up or down the line, whichever way you want to go with Terrill Bell--the federal government is willing to let George do it, George being the states in most cases; and, unfortunately, the states are no more willing, with two or three exceptions perhaps, to come to grips with the fundamental issues of the importance of education. I'm not talking about training now. I'm talking about education. We're up to here (indicating) with technology. We're going to produce all kinds of technologists. Well, who's going to run the technologists? They know what they're doing in very limited sense, but they don't know what it's all about necessarily; and we have fallen back now to a position where it may take another Sputnik or some other kind of cataclysm before we wake up in this country at national and state levels and local levels to the importance of education at every level and get with the job that needs to be done. Thank you.

MR. NEWMANN: On the second part of your question, Mr. Spraggins, were you addressing that to Dr. Van Doren?

MR. SPRAGGINS: Yes.

DR. VAN DOREN: The only thing I would like to say is that as to--I, too, think the government has a role to play here, and I wish it would play it; but even if it did, we're not going to do it the way the Swiss or the Russians or the Germans or the French do it. We're not organized that way. We're not that kind of country; and as to what you do in the absence of any sort of similarly powerful national source for educational policy and implementation, I really mean it when I say it would help to begin almost anywhere. I cannot emphasize too much that, as far as we're concerned, you do almost any one of these things, and you're going to have a better school than you had if you did none of them, that we think they all make sense in terms of a certain conception of schooling that we've set forth here. So we can defend them all as necessary to that end; but that's not to say that they all have to be done at once or they all have to be done entirely, because that's not going to happen either.

What we're saying is that you take any of these steps, alter your school in any of these ways, then it's going to be a better school than it's been, and if you urge us to be practical or wonder how it could be implicated or secretly feel that it's a good idea but how could it ever happen, that's how it could happen. I'm sorry, but I really think that's true.

MR. WALLHAUS: There are two things about The Paideia Proposal that I find positive that I don't think have been mentioned aside from it being conceptually philosophically sound from my perspective.

The one point that has been touched on, the question of the program being designed for all students, I must say that I would have been rather skeptical about that had it been presented as a conceptual, philosophical model with the simple notion that, well, now, all you need to do is put it together, and everyone will be taken care of, but the proposal, as I understood Mr. Van Doren to describe it, also gives emphasis and makes provision for the fact that certain students are going to need additional help and work during the course of study, if not before entering the course of the proposal; and I think the fact that that issue has not been kicked under the rug, which would have been easy to do, leads me to believe that it indeed is a serious proposal for all students.

The second point that I find positive is that we know that the one variable that is associated with an incentive for additional learning is success and experience in past learning. To the extent that individuals can find learning as a positive experience, they will continue to seek after learning. It seems that much of the emphasis in the proposal is to prepare people for additional learning, and I guess I have a vision of students being more turned on by certain of the aspects of the proposal that go beyond the traditional lecture mode. I think those two elements, in addition to other things, lead me to feel positive about the approach.

MR. NEWMANN: I'd like just to make an observation in terms of the discussion. When I agreed to assist in these proceedings, I did so partially on the grounds that I might learn something about the topic--transition to college education, because I don't know very much about that particular topic, and I notice that much of the discussion really have focused on schools below the collegiate level. This morning some concerns were raised with the nature of collegiate education and some concerns on the question of transition, whatever that means.

But just in order to keep in touch with official agenda of these proceedings, I would like to remind people and invite them to comment on the particular issues involved in transition if anyone wishes to address that matter.

MR. DORNER: I'm very hesitant to make any comments. For one reason my name is George, and my field is in technology; and I also am from a two-year college which, while it is generally regarded as postsecondary education, it is seldom considered as higher education by those in the high schools and frequently by those in the universities. I guess we are a transition institution by the way we are created. We have to react to what the high schools and the communities send us. We usually do that or try to do that on a more rapid basis than the high schools do, and we have to try to get people into the transfer institutions and local industries, and frequently those are changing at a more rapid pace that makes it necessary for us to respond on our output in a more rapid fashion than sometimes the high schools of the universities do, not that we all do an equally good job at it; but that, in fact, is the charge in that type of institution.

Education changes slowly, if at all, and it usually is by an economic push, which I think is what causes the political push frequently, and I fear that the economic changes that are being made are impacting the changes in quality at the college level, and there is some sort of trickle-down theory working in this regard. For example, the admissions requirements for our own students and for those from our local extremely good high schools to get into engineering in the major state institutions in Illinois hs gone up radically this year, and one major state institution here in Chicago cut back on the number of engineering students they were taking by 15 per cent. The quote was made earlier of an ACT score of the high 20's--and I heard 31 for electrical engineering for admission into Champaign. I was told by another major state university this last week that for our own students with a two-year B.A.S. degree in the technical field and an A.A.S. degree, not a transfer degree, to be admitted into one of their catch-on programs, they should study the same math and physics as if they were to anticipate going to Champaign; and on top of all that, the requirements to get into the school of business or school of commerce at Champaign are now higher than they are to get into the school of engineering. All those things are well known in the affluent suburbs where I live; and having a student who is a freshman in college, I have just gone through a lot of considerations of standards and having a great deal of skepticism about the way she was prepared, you know, to think in the way by which Mr. Van Doren's curriculum would have done--the trickle-down part, of course, is that parents know this. People who are educators that I talk to, elementary educators, have bandied about this issue of ACT scores to get into engineering at Champaign, and I think it's got to have a very deleterious effect on what we all do. For one thing, it appears to me it's going to create equality of the type that I'm not sure we want but indicates we're going to get it. There's going to be the same competition at the high levels to get into the hot programs which right now seem to be commerce and engineering, and I pose the question of what that will do with respect to equality of opportunity for students who are able from minorities; but unless special concessions, very special concessions, are made, it seems to me it would be very big disadvantage to teach in those institutions. A major concern of mine in getting students educated is to get them in the right box in the first place. In our own case, we have an extremely difficult time trying to find out what math course to put a student in. We have more entry levels than most anybody else, starting somewhere with arithmetic to somewhere beyond calculus.

I wish, speaking from a transition institution, that the place that is going to pass students on to the universities in large measure, I wish that students had not only learned more but wished they have taken the right course. To me, a lot of headway could be made if we would do a lot better counseling of those students and impress upon them early on that they probably are going to need some mathematics even if they are only going to be a business major, and that's often the way the issue is treated. High school counselors are notoriously bad. They tend to counsel according to the level where they are thinking, and that level frequently is not high enough in terms of today's technical, scientific, and mathematical requirements.

The final point I would make is that there seems to have been very little comment made today about how we can make the teachers better facilitators of good teaching, good learning; and I often think, as has been mentioned earlier, if the thrust of the new math program, post-Sputnik area, had been more along the lines of what can we do to make the math teaching that's going on more fun for the teacher, more rewarding for the teacher, and at the level that we were currently teaching, I think it would have been much further ahead at this point in terms of our scientific and mathematic accomplishments through the schools than what has happened with what some people have called the new math debacle.

Thank you.

MS. CHAPMAN: My name is Bernadine Chapman, and I'm from Illinois Northern University, and I'm representing the ILIAC, which is a state organization dealing with economic opportunity. There are a couple of suggestions or observations I would like to make.

First, I'd like to say that this has been most enlightening. I have enjoyed the presentations by all of the speakers.

The suggestions have to do with excellence in education in terms of first teacher training. This is an observation that can be debated, or a suggestion, however you may take it, but I feel very strongly that this is a beginning point. I do feel that teachers have to be better trained and teachers have to be more carefully selected, and I say that because I had the privilege just a week ago to meet with a group of educators from the College of Education discussing at the college level the necessity to implement some basic constances for teachers or individuals aspiring to be teachers, and it was most depressing to hear individuals indicate that these students--honor students as well as students who may be considered from low S.E.S. or socio-economic statuses--had to be tested in grammar, in reading, and spelling to determine whether those individuals could enter the teaching education program or not, and finding that many of those students after having been tested were ineligible to enter unless they could upgrade their skills and pass those three tests.

Now, an example that was given interms of spelling words had to do with words like "tomorrow", "license", "mathematics", "English". These are stucents who are already in college, some of them coming in with ACT composites of 10, some of them 22 or higher. These are the individuals that we are looking at who are aspiring to become educators and who will eventually, some of them, educate our children.

Another point or observation that I would like to make has to do with the school's curriculum in terms of basic competences, which I believe all three speakers were hitting on and Adrienne Bailey in particular. I think that it is high time, I feel, as a parent first, as a teacher next, and as an administrator last, that we do demand that our students are able to acquire certain competences at each level and, also, that those students before moving on to the next level indicate those competences through some kind of evaluation system that would be in a conforming manner for all schools, whether it be nationally or within the state. We have some schools that are considered excellent, high schools or elementary schools. We have other ones that are not considered so good. These are things, I know, have political and economical ramifications, and I'm not ready to deal with those, but maybe you are; but, to me, these are two points that are very vital: the teacher training that is being done; and then when the student begins school, whether it's at that preschool level, or first grade on through twelve, that certain skills are acquired before those kids are moved on.

There was another point that Dr. Van Doren made which I find to be very important because when I was teaching at the elementary level, I recall some of my colleagues indicating that they had worked at a school where this male instructor--and this is not sexism--but this male instructor was teaching a group of fifth graders, and feeling that he had a very difficult time in terms of disciplining the students, so rather than being fired because he did have tenure--and it's a little more difficult to remove someone at that stage, individuals decided the best thing would be to kick this person upward. So, in other words, the person became a principal, and I don't think that's the definition that Dr. Van Doren gave us as the principal educator of the school, but this is what happened.

There are many other points, but thank you for your indulgence.

May I make one further comment, and this probably could be answered by Mr. Wallhaus.

In reference to the program I work with, which is the postsecondary program at the college level, and we are about--not remediated--I would rather say doing developmental education, because I believe we are not suppose to be remediating, according to Illinois, at the high education levels; but this particular program provides academic support and assistance to students who come in who have not been "properly prepared"; and in looking at a study that was recently released, highschool and beyond, local Illinois students, it concerns me very much to see that we have approximately 75 per cent of our students in general education or vocational educational courses or curriculums in terms of courses that are important back there, and you have general education sophomores, 53 per cent of the student population aspiring to be in general education courses program. 40 per cent of those students in those general education programs in high school were seniors. In the academic program, of the sophomores, there were only 25 per cent; seniors, 34 per cent; and then vocational, sophomores, 22 per cent; seniors, 26 per cent. I'm wondering why, what is the problem in terms of more and more students seemingly going into the general and vocational programs as opposed to the academic ones, yet when it's time to come to college, we get many of those individuals who are in general ed. or vocational, and, therefore, they do oftentimes needs some type of developmental assistance. What would be your remarks about that in terms of the schools within the State of Illinois?

MR. WALLHAUS: I think one of the problems is that it is really not very surprising that secondary schools do not give emphasis to college preparatory work if college preparatory work is not given emphasis by colleges and universities; and I think that, indeed, if we expect the high schools to provide the basic programs and college preparatory work for those who intend to pursue a postsecondary education, it is going to be largely as a result of colleges and universities coming out four-square that those standards are to be achieved and maintained.

Now, having done that, having established the type of standards and expectations that I personally think we need to do, I think that it is absolutely unrealistic to think that in the immediate future all students are going to be able to meet those standards; and if we're going to pursue the goal--given that we're going to pursue the goal is the way I prefer to say it--providing access, and I mean access to economically and educationally deprived students, we're going to have to fill the gap, and filling the gap means offering some form of remediation.

I think the question that needs to be answered is how are we going to implement the necessary kinds of remediation that is needed and how are we going to restructure priorities so that the resources are available to do so.

Now, with regard to the special assistance programs, I think that indeed is part of the answer. Special assistance programs, the way we define them in Illinois, are rather broad based kinds of programs, not simply remediation of basic skills programs; and I judge the programs that you are familiar with and perhaps the one you're involved in is conceived as a rather broad based program, including the full range of elements of career values, academic values, tutoring, special learning skills, and the full scope of things. Now, the Illinois policy, while it does set a direction for trying to achieve remediation at levels before the students enter the college and the universities, I think does recognize full well that as part of the services of the special assistance program, that remediation is one of those services that will have to be provided if we're not going to be unrealistic about the fact that maintaining the standards is going to require special assistance in remediation if we're to continue to pursue the goal of equal access.

MS. ISENBERG: I'm Joan Isenberg. I would like to ask one question.

At a conference at our local high school, it was pointed out that entrance into the Illinois colleges was based on class rank than on what courses you took, so that, in fact, you might have a higher class rank taking the general courses than if you took the college credit, and that some of the students have figured that out, and I think that answers some of your questions. It seems that in the high school where I come from where there is no weighted classes, that some of the students may, in fact, be getting a better education but compromising themselves in terms of being able to get into some of our state colleges. Could you respond to that, is that wrong information?

MR. WALLHAUS: I think that most colleges and universities in the State of Illinois use some combination of admissions test score and class rank and weight them in different ways. I think at the same time, while using those yardsticks, if you will, as the admission standards, they're very short on specificity with regard to particular courses and particular academic backgrounds that should be achieved as part of the admissions test. Am I missing your question?

MS. ISENBERG: No, I guess what you are saying is true; but in our high school, you can take English: basic English, general English, or honors English. The person from Illinois who was the admissions officer said we do not weight honors English any greater than any other English course, therefore, an "A" in the general course weights the same way, and we look as class rank as the same thing. He says we do mix them, but I think that would tend to explain what she is saying, is why would students take the college prep courses if there's a course that requires less work on their part would get them the--it doesn't help in the end, but whether the kids are as long-sighted as that, but maybe that would answer some of the questions she had.

MR. WALLHAUS: You know, I'm sure you are right about that, and while I'm not aware of that particular provision in detail, it's my impression that colleges and universities are not very specific, not only about the delineation between an honor course and a regular course and an entry course and so forth, they're not even very specific about a course in English at all.

MS. ISENBERG: Actually, there are some private schools who are very specific and--

MR. WALLHAUS (interrupting): i'm sure that if you generalize on my statement, I'm sure it's going to fall apart in particular instances, but I think that's a good point, and I'm sure you are absolutely right on the mark.

MR. NEWMANN: Any other questions or comments?

MS. WALLACE: My name is Martha Wallace, and I am representing the Minnesota Chapter of the American Association of Educational Opportunity Programs, which is a Minnesota Chapter. I'm also a mathematics educator, and I will speak to a couple of things from that point of view.

First of all, it seems to me if we're just talking about what can happen right now, I think we're talking about trying to get the students convinced that they need to take these college prep classes. Most schools have something. It's just that a lot of times the kids don't take them. One of the things that we keep talking about is remediation at the college level, and I think we need remediation if we don't have them taking the classes that they should be taking at the high school level.

One of the things that concerns me in mathematics in particular, but I'm sure it's true in a lot of other fields as well, is if students are able to take remedial courses and get credit for them, take some things that they can take that should be taken at the high school and get college credit for them, there is no way on earth that we can convince them that they should be taking them at the high school level.

Again, in mathematics, there have been studies that I can--I'm sorry, I cannot cite them--that say that if the student is out of high school math for two years, there is almost no chance that they are going to be able to pick that up again and achieve success in the calculus sequence, so that if we have students dropping out of high school, and in a couple of years thinking that they can pick up high school higher algebra and so on, pre-calculus and then getting into a calculus sequence in college, they are sure to fail. So I think that we need some better counseling. I think that we need to train our counselors a lot better in terms of what is necessary in order to get ahead in college in the particular things that students want to do. I think, again, in terms of mathematics and science, a lot of students that I work with seem not to realize that they are going to need these mathematic and science courses for their chosen field until they get into it. They think that they don't need mathematics for economics until they get to college and find out they do. They are even finding out that they need mathematics for sociology and psychology and all those things that everyone was telling them that if they're going into that, they don't need anything more than algebra. So we need to do something with our counselors, and we need to be careful with the kind of college credit that we give for remedial courses.

The second point I'll make is just picking up on what some of the other people have talked about--the need to get better teachers. I think that is just the thing that is most necessary in all of this. Somehow we have to get the teachers. We have to make teaching fun. If we want to say that, we have to do as Mr. Chandler said, somehow look at the values people place on education. As Dr. Van Doren, there are people teaching for $13,000, and why are they teaching, because there's an intrinsic worth in teaching. If that's true, then we have to somehow get that word and get those people in. Again, educators I think have to push some of their best students into teaching. Best students don't necessarily have to go into engineering and computer science and business, just as those of us at the college level take a look at our really good students and say, "I think you should go to graduate school and do this," we should also say, "I think you should go into teaching. You have a gift in that area."

The other thing, and, again, this is purely mathematics; but I suspect it applies to other areas as well, is that students at the high school level, very often teachers at the high school level, do not see them matching to the various disciplines. That comes right back to that problem of thinking of I'm going into psychology, I don't ever need to take any mathematics. We need somehow to increase the articulation between high school and college people and maybe between college and graduate level people as to how we use different disciplines in our own discipline.

Thank you.

MR. NEWMANN: Thank you.

I think we have time for one more comment.

MS. MORRIS: I'm Jeanne Morris from the College of Education, Illinois State University.

In terms of what the lady before me just said, as teaching, guiding students into the profession of teaching, I had the opportunity to be on a panel just recently on our campus, and as all the information shows that the other people brought in terms of mass communication and computer science, there was nothing that I could do to convince any student in that room to go into teaching. The glamour of these other professions is too much. We have to do something about that, to update the profession.

I also wanted to say in terms of The Paideia Proposal, that Bob Collins in Chicago is doing something very similar to that in terms of helping students learn how to learn with equality for all

MR. NEWMANN: Thank you.

At this time I would like to turn the proceedings over to Clark Chipman. Do you have anything to say?

MR. CHIPMAN: I would just like to thank the presenters and the panel for taking time from their extremely busy schedules to come today, and thank all of you for your participation, and at that, I will officially bring the hearing to a close.

(Whereupon, at 3:00 o'clock p.m., the hearing in the above-entitled matter was closed.)

CERTIFICATE

This is to certify that the attached proceedings before Clark Chipman et al, of the U. S. Department of Education, in the matter of:

EXCELLENCE IN EDUCATION: Preparation for the Transition To Higher Education,
Chicago, Illinois,
Wednesday, October 6, 1982,
were held as therein appears, and that this is the original transcript thereof for the files of the Department of Education. k

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